PIT PDS PA 2023
LAMPUNG

PERHIMPUNAN DOKTER SPESIALIS PATOLOGI ANATOMI (PDS PA)

E-PROCEEDING

REVOLUTIONIZING ANATOMICAL PATHOLOGY SERVICE IN INDONESIA

WORKING CONFERENCE & ANNUAL SCIENTIFIC MEETING 2023

Musculoskeletal Pathology
Neuroendocrine Pathology
Haematolymphoid Pathology
Neuro & Eye Pathology

12th – 15th October 2023, Bandar Lampung

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E-PROCEEDING REVOLUTIONIZING ANATOMICAL PATHOLOGY SERVICE IN INDONESIA

Preface

By mentioning the name of the almighty God who is most loving and merciful, we intend to hold "Annual Scientific Meeting (PIT) 2023", with theme " REVOLUTIONIZING ANATOMICAL PATHOLOGY SERVICE IN INDONESIA ". We hope this scientific meeting can improve our knowledge in anatomical pathology to support continuing professional development for the pathologists in improving anatomical pathology examination services for Indonesia. Also, as a means of communication to strengthen the good relationship between all pathologists and specialist program students in Indonesia. We also hope this event will bring benefits to all participants and members of IAP.

We look forward to enthusiastic participation and support from all parties so that the 2023 PIT event can run well. Thank you very much to all members, participants and vendors who helped make this event happen.

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dr. Vega Karlowee, Ph.D, Sp.P.A., Subsp. S.M. (K)
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Annual Scientific Meeting - Day 1

Friday, 13th October 2023

Swiss-BelHotel Bandar Lampung

TIME	SCHEDULE	LOCATION
07.30 - 13.30	**Re-registration**	La Luna (Basement Floor)
08.00 - 10.00	**Research Proposal and Oral Presentation** **Poster Presentation**	(M Floor) (La Luna, Basement)
10.00 - 11.00	**Opening Ceremony**	
11.00 - 11.15	Inauguration of the Booth Exhibition	Ballroom Lobby
11.15 - 13.00	Lunch Break	Restaurant (Basement Floor)
13.00 - 13.30	Lecture 1 : **General Lecture 1 - Advance Technology in Anatomical Pathology Practice (Prof. Tan Soo Yong)(Singapore)**	Moderator : **dr. Endang S. Hardjolukito, Sp.P.A., Subsp. H.L.E.(K)**
13.30 - 14.10	Lecture 2 : **Hematolymphoid 1 : Mimickers of B cell lymphoma (Prof. Tan Soo Yong) (Singapore)**	
14.10 - 14.50	Lecture 3 : **Hematolymphoid 2: Mimickers of T cell lymphoma (Prof. Tan Soo Yong) (Singapore)**	
14.50 - 15.00	QA	
15.00 - 15.15	Coffee Break	Ballroom Lobby
15.15 - 15.35	**Book Launching. Bridging Knowledge and Practice :** Introducing The Immunotherapy Companion Diagnostic Guideline and Image Bank Training Platform for PD-L1 and MMR Interpretation **(Dr.dr. Lisnawati, Sp.P.A.,Subsp.S.P(K), Subsp Kv.R.M(K))**	Merck Sharpe Dohme (MSD) Indonesia
15.35 - 16.15	Lecture 4 : (Hybrid) **Eye Tumor 1** **(dr. Dilip Kumar Mishra, MD, (India)**	Moderator : **Dr. dr. Ni Putu Sriwidyani, Sp.P.A., Subsp. S.M.(K)**
16.15 - 16.45	Lecture 5 : (Hybrid) **Eye Tumor 2** **(dr. Dilip Kumar Mishra, MD, (India)**	
16.45 - 17.15	Lecture 6 **: Eye and Orbit Tumor experience** **(dr. Vega Karlowee, Sp.P.A., Subsp. S.M.(K)., Ph.D))**	
17.15 - 17.25	QA	
17.25 - 17.45	Rehearsal	Ballroom

Annual Scientific Meeting – Day 2

Saturday, 14th October 2023

Ballroom, Swiss-BelHotel Bandar Lampung

08.00 - 08.20	Lecture 7 **Ethic / Medicolegal : Etik Kedokteran Patologi Anatomik** **(Dr. M. Fakih, S.H., MS)**	Moderator : **Dr. dr. Pieri Kumaladewi, Sp.P.A., MH., FISQUA.**
08.20 - 08.40	Lecture 8 : **Pelayanan Patologi Anatomik dalam Regulasi Kesehatan di Indonesia** **(Dr. dr. Diah Rini Handjari, Sp.P.A., Subsp. D.H.B.(K)**	
08.40 - 08.50	QA	
08.50 - 09.30	Lecture 9 : **BST 1 Clinical Aspect of Sarcoma** **(Prof. Dr. dr Ahmad Fauzi Kamal Sp.OT (K))**	Moderator : **dr. Nurjati C. Siregar, MS, Ph.D, Sp.P.A., Subsp. M.S.(K)**
09.30 - 10.10	Lecture 10 : (Hybrid) **BST 2 Pattern Approach of Soft Tissue Sarcoma** **(Prof. Brendan C. Dickson) (Canada)**	
10.10 - 10.20	QA	
10.20 - 10.40	Epredia Revos Rapid Tissue Processing (Sherley Silitonga)	PT. Enseval Medika Prima
10.40 - 10.50	Coffee Break	Ballroom Lobby
10.50 - 11.20	Lecture 11 : **BST 3 : The essential role of FNAB in Bone Tumor in Indonesia & Pattern Based Diagnosis.** **(Dr. dr. Sjahjenny Mustokoweni Sp.P.A., Subsp. M.S. (K) , MIAC))**	Moderator : **dr. Djumadi Achmad, Sp.P.A., Subsp. M.S. (K)**
11.20 - 11.50	Lecture 12 : **BST 4 : Differential Diagnosis of Most Common Soft Tissue Tumor.** **(dr. Eviana Norahmawati Sp PA Subsp. M.S.(K))**	
11.50 - 12.20	Lecture 13 : **BST 5 : Differential Diagnosis of Most Common Bone Sarcoma.** **(dr. Ery Kus Dwianingsih, Ph.D, Sp.P.A., Subsp. M.S.(K), Subsp. S.M.(K))**	
12.20 - 12.35	QA	

Annual Scientific Meeting - Day 3

Sunday, 15th October 2023

Ballroom, Swiss-BelHotel Bandar Lampung

08.00 - 08.30	Lecture 18 : (Hybrid) **Endocrine Slide Seminar. (Prof. Alfred Lam) (Australia)**	Moderator : **Prof. dr. Bethy S. Hernowo, Ph.D, Sp.P.A., Subsp. H.L.E.(K)**
08.30 - 09.00	Lecture 19 : **Endocrine Slide Seminar. (dr. Nila Kurniasari, Sp.P.A., Subsp. H.L.E.(K))**	
09.00 - 09.10	QA	
09.10 - 09.40	Lecture 20 : **BST 6 : Bone Tumor : Slides Seminar. (dr. Heriyawati, Sp.P.A., Subsp. M.S.(K))**	
09.40 - 10.10	Lecture 21 : **BST. 7 Rare and Interesting cases of Soft Tissue and Bone Tumor** (Sanglah Hospital Experience) **(Dr. dr. I Wayan Juli Sumadi, Sp.P.A., Subsp. M.S.(K))**	
10.10 - 10.20	QA	
10.20 - 11.00	Closing	

WORKING CONFERENCE & ANNUAL SCIENTIFIC MEETING 2023 LAMPUNG

SYMPHOSIUM

PATHOLOGY OF EYE AND ORBIT

Dilip Kumar Mishra

Ophthalmic Pathology and Laboratory, LV Prasad Eye Institute, Hyderabad, India

As indicated by the words “pathos” and “logos”, pathology is a study of diseases or suffering. Pathology is considered as a bridge that links clinical practice with basic science. Ophthalmic pathology is one of the emerging yet neglected sub-specialty branches of Pathology. Ophthalmic Pathology, like all branches of pathology, comprises structural and functional changes in tissue and cells which can cause disease or neoplasm. The eye is different from other organs as this one is an immune privileged organ, and the cornea is transparent and has no blood vessels. Corneal pathologies, either due to infection or trauma, may cause inflammation and blood vessel formation. Similarly, intraocular organs are special, and some particular or specific disease or neoplasm arises from them. Whereas the orbit is a compact pyramidal structure formed of seven bones and includes the eyeball and adnexal structure. From orbit, all the disease or neoplasm arises, or metastatic deposits can occur from other parts of the body. **Objective:** To know how to handle and process tissue, to know about the normal corneal histopathology and disease of the cornea and to discuss the intraocular and orbital tumor. **Methods:** Histopathology of diagnosed cases of eye and orbital disease will be discussed in correlation with clinical findings, immune and special stains. **Conclusion:** Cornea is a specialized avascular transparent organ and from this degeneration, dystrophy and infection can arise, whereas from orbit inflammatory to benign to malignant disease can arise and for the diagnosis of these diseases, knowledge of normal histology is essential.

ADVANCE TECHNOLOGY IN ANATOMICAL PATHOLOGY PRACTICE

Tan Soo Yong

Department of Pathology, National University Hospital, Singapore

A multiple instance learning framework for lymphoma diagnosis: We developed an AI algorithm for distinguishing reactive lymphoid hyperplasia from various types of B- and T-cell lymphomas using just unannotated H/E-stained slides at 50x, 100x and 200x magnification. Using a tile-based multiple instance learning framework, we obtained an initial 139 whole-slide images, with an average file size of 1.91GB. Preprocessing of the dataset was performed by generating 192×192 pixel tiles at 50×, 100× and 200× magnifications. Stride lengths of 50% was set at the 5× and 10× magnification levels to augment the sample set. These tiles were then sorted into one of 10 classes: anaplastic large cell lymphoma (ALCL), classical Hodgkin's lymphoma (CHL), follicular lymphoma (FL) including high-grade and low-grade, large B-cell lymphoma (large BCL), mantle cell lymphoma (MCL), marginal zone lymphoma (MZL), small lymphocytic lymphoma (SLL), T-cell lymphoma (TCL), reactive lymphoid tissue (reactive LN) such as follicular hyperplasia and Kikuchi's disease, and 'uninformative' tiles. We achieved a per-tile accuracy of between 67% to 97%, and a per-WSI accuracy of between 80.8% to 100%. **MiRNA profiling as a novel means for diagnosis of low grade B-cell lymphomas:** In this talk, I will discuss how we can differentiate various types of low-grade B-cell lymphoma from reactive lymphoid proliferation using a 100-miRNA panel by training and testing on a combined cohort of samples. 382 subjects were recruited into the study, comprising 100 cases in the Discovery phase and 282 cases in the Testing Phase. Using Student t-test, the most differentially expressed miRNAs were identified and used to create a 100 miRNA panel for classification of lymphomas. By combining cases in both Discovery and Testing phases and dividing cases into 75% training and 25% validation cohorts, we achieved a predictive accuracy of >93% using the 100 miRNA panel. **Clinical Applications of a Targeted NGS Panel in Singapore Setting:** In this talk, I will discuss the indications, benefits, as well as the limitations and challenges of offering NGS-based assays in a clinical pathology laboratory. We have developed a 50-gene limited NGS panel primarily targeting the actionable or clinically relevant mutations in a wide range of solid tumours including cancers of the lung, breast, gastrointestinal tract including oesophagus, stomach and colon; cancers of the bladder, head and neck, thyroid, soft tissue, kidney, ovary, endometrium, cervix and brain. In particular, this panel

focuses on biomarker-drug matched indications in non-small cell lung cancer, in breast cancer and colorectal cancer. Using RNA sequencing, these genetic alterations include 45 single nucleotide variants and indels, 18 fusions and 13 amplifications. Our APEX NGS test displays high precision and concordance compared to single-gene tests. As for amplifications and fusions, the performance is comparable to FISH but the limit of detection is higher. As for Sanger sequencing, upfront use of NGS is superior especially when the test material is limited as this will avoid sequential testing using an algorithmic approach. From the financial perspective, NGS is also cheaper compared to multiple single-gene tests.

MIMICKERS OF B CELL LYMPHOMA AND MIMICKERS OF T CELL LYMPHOMA

Tan Soo Yong

Department of Pathology, National University Hospital, Singapore

Diagnosis of lymphomas is generally considered to be difficult because unlike solid tumours, there is a paucity of architectural features. The cytomorphological clues to lymphoma diagnosis are useful but there is significant overlap between disease entities. **Morphological mimickers of B-cell lymphomas:** In the case of B-cell lymphomas, the morphological features of low-grade B-cell lymphomas such as small lymphocytic lymphoma, mantle cell lymphoma and marginal zone lymphoma are fairly similar. It is difficult to distinguish between each diagnostic entity from an infiltrate of monotonous small lymphocytes in a small biopsy. The neoplastic cell population in low-grade follicular lymphoma and marginal zone lymphoma features greater cellular heterogeneity with a mixture of large and small lymphocytes, which make the distinction from reactive lymphoid hyperplasia challenging. Aggressive B-cell lymphomas do not always present as diffuse sheets of large cells. They can be subtle and difficult to detect as in intravascular large B-cell lymphoma, resemble Burkitt lymphoma with a starry sky appearance or lymphoblastic lymphoma with more immature-appearing chromatin. T- and histiocyte-rich B-cell lymphoma featuring scattered large cells in a background of small lymphocytes can resemble classical Hodgkin lymphoma and angioimmunoblastic T-cell lymphoma. **Morphological mimickers of T-cell lymphomas:** With regard to T-cell lymphoid neoplasms, the challenge may even be greater in that the neoplastic cell population may not all be large as in anaplastic large cell lymphoma but features a heterogeneous population of small, medium sized and large cells. EBV reactivation resulting in scattered CD30+ large B-cells can often mimic Hodgkin lymphoma whilst the cytokines produced in T-cell lymphomas can result in an excess of reactive inflammatory cells that may even outnumber neoplastic cells. This may occasionally be seen in angioimmunoblastic T-cell lymphoma, primary cutaneous anaplastic large cell lymphoma and extranodal NK/T cell lymphoma. As with intravascular large B-cell lymphoma, the subtle sinusoidal pattern of neoplastic cell infiltration in hepatosplenic T-cell lymphoma is often missed in an otherwise normal-appearing bone marrow trephine, liver or splenic biopsy. **Phenotypic and molecular mimickers in lymphoma diagnosis:** Given the limitations of morphology, the use of immunohistochemistry and in situ hybridization to detect alterations of protein, mRNA and genetic mutations have become an essential part of lymphoma

diagnosis today. Yet the pathologist must be aware of the common pitfall of phenotypic aberrancy. B-cell lymphomas such as small lymphocytic lymphoma, mantle cell lymphoma, marginal zone lymphoma and plasmablastic lymphoma may express T-cell markers such as CD3, CD5 and CD43 whilst T-cell neoplasms such as indolent T-cell lymphoproliferative disorder of the gastrointestinal tract and monomorphic epitheliotropic T-cell lymphoma may express CD20. The expression of EBER is very useful and essential for the diagnosis of extranodal NK/T cell lymphoma but this is also seen in classical Hodgkin lymphoma, plasmablastic lymphoma and EBV-associated large B-cell lymphoma. There is hardly any single diagnostic biomarker. Neoplastic cells positive for cyclin D1 do not necessarily mean mantle cell lymphoma and is often seen in hairy cell leukaemia and even the macrophages of Rosai Dorfman disease. The co-expression of CD30 and CD15 in large neoplastic cells of Hodgkin lymphoma has been taught to medical students for years but this pattern of expression may be seen in nasopharyngeal carcinoma and CD15 is often negative in many examples of classical Hodgkin lymphoma. Similarly, genetic alterations such as rearrangement of C-MYC is an essential diagnostic feature of Burkitt lymphoma but this translocation may also been seen in diffuse large B-cell lymphoma and the group of DLBCL/High grade B-cell lymphoma with rearrangements of C-MYC and BCL2. The MYD88 mutation that was presented as the diagnostic feature of lymphoplasmacytic lymphoma/Waldenstrom macroglobulinaemia is also seen in a subset of diffuse large B-cell lymphoma and splenic marginal zone lymphoma.

Conclusion: In summary, an accurate diagnosis of lymphoma requires careful attention to the clinical features, morphology, immunophenotype and genetic alterations. Advanced ancillary techniques including methylation and miRNA profiling, next generation sequencing and artificial intelligence will play an important role to improve the accuracy and precision of lymphoma diagnosis. However, the pathologist needs to be mindful that there will always be morphological, phenotypic and molecular mimickers. Whilst it is important to know the histological and molecular features of a disease, it is just as important to know what other diseases can share those features.

THE ESSENTIAL ROLE OF FNAB IN BONE TUMORS IN INDONESIA AND PATTERN BASED DIAGNOSIS

Sjahjenny Mustokoweni

Pathology Department Faculty of Medicine Universitas Airlangga / Dr. Soetomo General Academic Hospital Surabaya

Musculoskeletal tumors which consist of bone and soft tissue tumors have a low incidence but the number of cases continues to increase. Around 1.71 billion people on earth have musculoskeletal problems that cause disability and reduce the quality of life. To make a proper diagnose of bone tumors, a triple diagnosis approach is needed including clinical, radiological information and anatomical pathology. Primary bone tumors generally belong to the category of high grade malignant diseases. Fine Needle Aspiration Biopsy is a rapid procedure for outpatients and is one solution to overcome this problem. Although it is still controversial, it has many advantages, especially in terms of shortening the response time, which is very helpful for both patients and clinicians especially in determining what treatment to take. So it is very suitable for Indonesia which still has areas with minimalist facilities. Musculoskeletal tumors consisting of bone tissue and soft tissue have many morphological similarities in several entities, so it is necessary to recognize the morphological patterns that are associated with clinical and radiological images. The morphological pattern of bone tumors for the cytology method is similar with histopathology. It includes a type of matrix consisting of bone components and cartilage components. Apart from that, the recognizing of cell shapes consisting of small round cells, spindle cells, epithelioid cells, containing datia cells and pleomorphic cells are very important. The other is bone tumor from metastatic carcinoma.

Keywords: bone tumor, FNAB, morphological pattern

DIFFERENTIAL DIAGNOSIS OF MOST COMMON SOFT TISSUE SARCOMA

Eviana Norahmawati

Anatomic Pathology Department, Faculty of Medicine, Brawijaya University, Saiful Anwar Hospital Malang

Sarcoma are a heterogenous group of rare mesenchymal malignant tumors which can arise in all sites of the body and are classified by their line of differentiation according to the type of mature tissue they resemble. There were approximately 13,000 new cases of Soft Tissue Sarcoma (STS) diagnosed in The United States in 2019, accounting for < 1 % of all cancers.Sarcoma can occur at all ages but STS are more common in adult. Most common STS in adult are Undifferentiated Pleomorphic sarcoma (UPS), myxofibrosarcoma, and liposarcoma. Children are more likely to have a rhabdomyosarcoma, and most common sarcoma in adolescent is Synovial sarcoma (SS). Each type of most common soft tissue sarcoma has many differential diagnoses, which can resemble benign tumors, intermediate tumors, malignant tumors of the same differentiation or resemble other malignant tumors of different differentiation. Misdiagnosis can lead to therapeutic errors that are fatal to the patient. Therefore, it is very important to understand the diagnosis criteria and various differential diagnoses of STS to be able to establish the proper diagnosis in patients with suspected soft tissue sarcoma. Sarcoma diagnosis is highly recommended with a multidisciplinary Triple diagnosis approach because the diagnosis of soft tissue sarcoma requires a correlation between pathological features with clinical and radiological features.

Keywords: differential diagnosis, soft tissue sarcoma diagnosis

UPDATES ON THE 2022 WHO CLASSIFICATION OF THYROID TUMOURS

Alfred Lam

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There have been recent updates to the classification of thyroid neoplasms by the World Health Organization (WHO). These updates are the result of efforts by multiple experts in endocrine pathology, with contributions from other experts in the field. The 2022 edition of the WHO classification aligns with the terminology used in other books in the series. It makes greater use of whole-scanned sections and is the first to have online versions rather than hard copies. The classification of thyroid neoplasms by the WHO identifies follicular cell-derived neoplasms as the most common type. This group includes benign tumours, low-risk neoplasms, and malignant tumours. In the classification of papillary and follicular thyroid neoplasms, the BRAF-like and RAS-like molecular profiles are important factors. To receive accreditation for pathology practice, it is essential to incorporate the latest WHO classification and pathological staging into structured pathology reporting of cancer. These protocols require ongoing updates to remain current.

DIAGNOSTIC APPROACH OF PANEL LYMPHOMA: LIMITED PANEL

Hermawan Istiadi

Department of Pathology Faculty of Medicine Universitas Diponegoro, Semarang, Indonesia

Making a diagnosis of lymphoma using limited panel is a continuation of the basic panel, which is useful in diagnosing lymphoma which has diffuse architectural pattern with morphology of small cell, medium cell, large cell and mixed cell type, as well as lymphomas that have nodular architectural pattern. For lymphoma with a diffuse small cell pattern, limited panel is useful to differentiate small lymphocytic lymphoma/chronic lymphocytic leukaemia, marginal zone lymphoma, lymphoplasmacytic lymphoma and mantle cell lymphoma. For lymphoma with a diffuse medium cell pattern, limited panel is useful to differentiate burkitt lymphoma and high grade B cell lymphoma. For lymphoma with a diffuse large cell pattern, limited panel is useful to differentiate large B-cell/T-cell lymphoma and subtyping Diffuse large B-cell lymphoma. For lymphoma with a diffuse mixed cell type pattern, limited panel is useful to differentiate classic Hodgkin lymphoma, Nodular lymphocytic predominant Hodgkin lymphoma, T-cell/histiocyte-rich large B-cell lymphoma, Diffuse follicular lymphoma and blastoid/pleomorphic variant mantle cell lymphoma. For lymphoma with nodular pattern, limited panel is useful to differentiate Mantle cell lymphoma, Marginal zone lymphoma, Large B-cell lymphoma with IRF4 rearrangement, Nodular sclerosis classic Hodgkin lymphoma and Nodular lymphocytic predominant Hodgkin lymphoma. Although limited panel can confirm these types of lymphoma, in some cases a definitive diagnosis cannot be made on a limited panel. Lymphoma cases that cannot be confirmed with a limited panel need to be continued to enhanced panel or maximum panel so that a definitive diagnosis can be made.

Keywords: diffuse pattern, limited panel, nodular pattern

DIAGNOSTIC APPROACH OF LYMPHOMA: BASIC PANEL IMMUNOHISTOCHEMISTRY

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Lymphoma is a lymphoid-derived neoplasm occurring both nodal and extranodal and ranked as the 7th most frequent neoplasm in the world. Based on morphology characteristics, lymphoma is divided into Non Hodgkin Lymphoma (NHL) and Hodgkin Lymphoma (HL). The World Health Organization (WHO) classifies lymphoma into more than 100 subtypes based on clinical appearances, morphology, immunophenotype, and molecular alteration. Indonesian Lymphoma Study Group has developed practical guidelines to stratify the methods of lymphoma diagnosis based on each human resources availability and laboratory facility to simplify the diagnosis in limited resources. In this guideline, the immunohistochemistry panel is stratified into basic, limited, enhanced and maximum panels. The purpose of basic panel immunohistochemistry is to establish the basic diagnosis conclusion and to distinguish Non Hodgkin and Hodgkin Lymphoma, B cell or T cell. Basic immunohistochemistry panel for lymphoma includes CD20, CD3, Ki67, TdT, Cyclin D1, and CD30. Sign out diagnosis is different from WHO classification. There will be general terms such as Non Hodgkin, Hodgkin, diffuse, B cell, T cell, indolent, aggressive, high grade, low grade. More specific terms such as mantle cell subtype and lymphoblastic lymphoma can be achieved by adding Cyclin D1 and Tdt immunohistochemistry. CD 30 immunohistochemistry to determine the diagnosis of Hodgkin lymphoma or Anaplastic Large Cell Lymphoma.

ENDOCRINE SLIDE SEMINAR

Alfred Lam

School of Medicine and Dentistry, Griffith University, Australia

The adrenal medulla and extra-adrenal ganglia tumours are described in chapter 6 of the 2022 WHO classification (Fifth edition) of Endocrine and Neuroendocrine tumours. The tumours are divided into neuroblastic tumours, paraganglioma and phaeochromocytoma, and composite paraganglion tumours. The extra-adrenal tumours are divided into sympathetic paraganglioma and parasympathetic paraganglioma based on the different features. All these tumours in the paraganglioma and phaeochromocytoma could have metastatic potential. WHO did not endorse any scoring systems for predicting the metastatic potential of this group of tumours. Nevertheless, the use of markers such as S-100/Sox-10, Ki-67 and SDHB are promoted to assist in the assessments. The two cases in the slide seminar reflect the board spectrum of pathological features noted in this group of tumours.

ENDOCRINE SLIDE SEMINAR

Nila Kurniasari

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Cases related to endocrine are very interesting to study because the clinical manifestations vary, and sometimes make us confused with non-endocrine lesions. On this occasion we will discuss three endocrine cases originating from the thyroid and parathyroid glands, accompanied by a discussion of clinical, radiological and laboratory features so as to provide a holistic picture of endocrine tumors.

INTERESTING CASE OF BONE AND SOFT TISSUE TUMORS (DENPASAR EXPERIENCE)

I Wayan Juli Sumadi

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Neoplastic processes arise in tissues of mesenchymal origin far less frequently compared with those of epithelial origin. Soft tissue and bone sarcomas have an annual incidence in the United States of more than 6000 and 3000 new cases, respectively. Tumors of the musculoskeletal system are an extremely heterogeneous group of neoplasms consisting of greater than 200 benign types of neoplasms and approximately 90 malignant conditions. The relative incidence of benign to malignant disease is 200:1. During 2019-2020 In RSUP Prof. dr. I G N G Ngoerah, Bali there were a total of 474 cases of bone and soft tissue tumors, consisting of 264 bone tumors and 210 cases of soft tissues tumors. The majority of bone tumors were metastatic bone disease, with 72 cases (27.3%) followed by conventional osteosarcoma, 72 cases (17.8%). The most common cases of soft tissue tumors are lipomatous tumors (23.8%), followed by peripheral nerve sheath tumors (18.6%) and vascular tumors (13.8%). We will discuss some fascinating instances from our experience, including alveolar rhabdomyosarcoma previously diagnosed as malignant lymphoma and alveolar rhabdomyosarcomas previously diagnoses as malignant peripheral nerve sheath tumors. Many pathologists consider soft tissue and bone tumors to be among the most difficult pathological specimens they see in their daily practice. It's most likely due to the rarity of the cases and too many entities and histological variances. To be able provide an accurate diagnosis, pathologists must be exposed to a large number of cases through case sharing and participate actively in multidisciplinary teams.

Keywords: bone tumors, soft tissue tumors, Bali

WORKING CONFERENCE & ANNUAL SCIENTIFIC MEETING 2023 LAMPUNG

ORAL AND POSTER PRESENTATION

CORRELATION OF 8-OHdG AND NRF2 EXPRESSION WITH T STAGE IN INVASIVE BREAST CARCINOMA OF NO SPECIAL TYPE

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Background: Breast cancer is the most common malignancy in woman and is the second leading cause of mortality in Indonesia. Breast cancer cells can use increased ROS-induced oxidative stress to their advantage, making it a favorable situation for cell survival. Reactive oxygen species (ROS) has role in the promotion and progression of breast cancer in carcinogenesis through angiogenesis and generate growth signals, causing tumor cells to multiply and grow (T stage). One method of measuring ROS is detecting 8-OHdG, a biomarker of DNA damage caused by ROS, and Nrf2, the primary inductor of antioxidant enzymes. 8-hydroxy-2-deoxyguanosine (8-OHdG) and nuclear factor erythroid 2–related factor 2 (Nrf2) are involved in the proliferation of breast cancer cells, thereby affecting the aggressiveness of tumor. **Objective:** To analyze the correlation of 8-OHdG and Nrf2 expression with T stage of invasive breast carcinoma of no special type. **Methods:** This research design is analytic observational study with cross sectional approach. The samples are paraffin blocks from invasive breast carcinoma of no special type patients who underwent modified radical mastectomy (MRM) in anatomical pathology laboratory, Dr. Soetomo General Academic Hospital throughout January 2019 until December 2022 and will be divided into four groups based on T stage. Immunohistochemistry examination will be performed using 8-OHdG and Nrf2 antibodies. The difference of the expression and the correlation between them will be analyzed using statistical tests.

Keywords: breast cancer, invasive breast carcinoma of no special type, 8-OHdG, Nrf2, T stage

EXPRESSION CORRELATION OF LIGHT CHAIN 3 B (LC3-B) AND NICOTINAMIDE ADENINE DINUCLEOTIDE PHOSPHATE (NADPH) OXIDASE 4 (NOX-4) IMMUNOHISTOCHEMISTRY OF CLEAR CELL RENAL CELL CARCINOMA (ccRCC) BASED ON GRADING INTERNATIONAL SOCIETY OF UROLOGICAL PATHOLOGY (ISUP)

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Background: Clear cell renal cell carcinoma (ccRCC) is most common histological subtypes in renal cell tumors. These tumors very aggressive, often diagnosed at advanced stage. Reactive oxygen species (ROS) play role in inducing autophagy under physiological and pathological conditions. Nicotinamide adenine dinucleotide phosphate 4 (NOX-4) is the main ROS producing enzyme. Light chain 3 B (LC3-B) widely used marker specific of autophagy. Immunohistochemical expression of LC3-B and NOX-4 is used as indicator of prognosis and development of therapy in ccRCC. Researchers have not found studies regarding the relationship of LC3-B and NOX-4 immunohistochemical expression in ccRCC based on ISUP grading. **Objective:** To determine the relationship between LC3-B and NOX-4 immunohistochemical expression in ccRCC based on ISUP grading. **Methods:** This study used 35 slide samples/paraffin blocks of ccRCC cases that had been diagnosed histopathologically at the Anatomic Pathology Unit of Haji Adam Malik General Hospital Medan from January 2017 to April 2023. All clinicopathological data were taken from medical records. LC3-B and NOX-4 expression was carried out semiquantitatively based on multiplication between the intensity and percentage of expressed tumor cells in nucleus and cytoplasm tumor cells. Statistical analysis was carried out using test chi-square and alternative fisher's exact.

Keywords: ccRCC, LC3-B, NOX-4, grading ISUP

IMMUNOHISTOCHEMISTRY PROFILE OF NEUROENDOCRINE TUMOR AT TERTIARY REFERRAL HOSPITAL IN PALEMBANG: A FIVE-YEAR EXPERIENCE

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Background: Neuroendocrine tumors (NET) are a type of uncommon neoplasms originating from the neuroendocrine cell system. Recent decades, the prevalence of NET gradually increases, attributing partially to the utilization of advanced detection procedures using modern methodologies. **Objective:** The aim of this research was to discover the optimal biomarker among chromogranin, synaptophysin, Ki-67, and CD56 for the purpose of detecting NET, that attributed to gender and location of the tumor. **Methods:** In this retrospective cross-sectional study, a thorough examination was performed on a total of 71 cases obtained from archives of the Department of Anatomic Pathology Mohammad Hoesin Hospital, over the period from 2017 to 2021. The Chi-square test was used for data analysis. Bivariate analysis was performed using binary logistic regression tests to investigate the correlation between the independent variables, including gender and tumor site, and the dependent variable, which refers to the four staining results of NET. Out of the 71 recorded samples, 69 samples were subjected to analysis as the remaining samples turned out to have incomplete data. Four different antibodies were evaluated to find the association between these antibodies with gender (chromogranin, P=0.627; synaptophysin, P=0.929; Ki-67, P=0.315; CD56, P=0.524) and tumor location (chromogranin, P=0.792; synaptophysin, P=0.100; Ki-67, P=0.026; CD56, P=0.511). The study results indicated no association found between staining performance (chromogranin, synaptophysin, Ki-67, CD56) with gender. There is no association found between chromogranin, synaptophysin, and CD56 staining to tumor location, except for Ki-67.

Keywords: CD56, chromogranin, Ki-67, neuroendocrine tumors, synaptophysin

CORRELATION BETWEEN CXCL12 AND MMP-7 EXPRESSIONS WITH REGIONAL LYMPH NODES METASTATIC STATUS IN COLORECTAL ADENOCARCINOMA

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Background: Colorectal adenocarcinoma is the third-most common cancer in the world. The status of regional lymph node metastases affects the prognosis of colorectal adenocarcinoma. Most cases are presented at a late stage. A proper and significant biomarker examination is needed to determine the predictive factor and the opportunity for therapy as well. Upregulated CXCL12 expression in cancer cells promotes proliferation and metastasis. CXCL12 will activate CXCR4, which progressively upregulates MMP-7 expression. Increased MMP-7 will then degrade the extracellular matrix, facilitating the migration and metastasis of tumor cells. **Objective:** Analyzing the role of CXCL12 and MMP-7 in colorectal adenocarcinoma regional lymph node metastases. **Methods:** Observational analytic study with a cross-sectional approach Will be conducted on 47 formalin-fixed paraffin-embedded tissues of patients diagnosed with colorectal adenocarcinoma in the Anatomical Pathology Laboratory of Dr. Soetomo General Academic Hospital from January 2016 until December 2020. The samples will be divided into three groups based on the regional lymph node metastatic status, then stained with immunohistochemistry for CXCL12 and MMP-7 antibodies. Expressions of CXCL12 and MMP-7 will be analyzed using the Mann-Whitney Test. The correlation between CXCL12 and MMP-7 expression will be analyzed using the Spearman test. This research was approved by the Ethics Committee of RSUD, Dr. Soetomo Surabaya, with no 1341/LOE/301.4.2/VI/2023.

Keywords: colorectal adenocarcinoma, CXCL12, MMP-7, lymph node, metastatic status

CORRELATION OF CDK4 AND E2F1 EXPRESSION IN VARIOUS T STAGE IN RETINOBLASTOMA

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Background: Retinoblastoma is a neoplasm originated from the retina and frequently found in children between the ages of three to five years. The tumor cells ability to control the cell cycle is significantly influenced by CDK4 and E2F1. It is anticipated that the expression of CDK4 and E2F1 in different retinoblastoma T-stage states would serve as biomarkers of prognostic significance. **Objective:** To analyze the expression and correlation of CDK4 and E2F1 with pathological T stage in Retinoblastoma. **Methods:** This research is an analytical observational study with a cross-sectional approach. Based on the pT stage, 56 paraffin blocks from retinoblastoma patients at the Laboratory pf Anatomic Pathology, RSUD Dr. Soetomo Surabaya, will be divided into 4 groups. The immunohistochemistry technique will be applied to evaluate CDK4 and E2F1. The expression of CDK4 and E2F1will be analyzed semi-quantitatively using immunoreactivity score. The result of CDK4 and E2F1 expression will be then analyzed using appropriate statistical method.

Keywords: CDK4, E2F1, pT stage, retinoblastoma

HISTOPATHOLOGICAL FEATURES AND PD-L1 EXPRESSION IN ANAPLASTIC TYROID CARCINOMA

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Background: Anaplastic thyroid carcinoma (ATC) is a rare and very aggressive thyroid cancer. The imunotherapy using anti PD-L1 drugs was developing for the management of ATC patients. **Objective:** To determine the histopathological features and expression of PD-L1 in ATC. **Methods:** Immunohistochemistry staining was conducted with formalin-fixed paraffin- embedded from 13 samples of ATC to assess PD-L1 expression (Abclonal, CD274 clone, Rabbit pAb, dilution 1:200). PD-L1 expression was assessed using the Tumor Proportion Score (TPS), the percentage tumor cells with partial or complete membrane staining at any intensity. PD-L1 expression was <1% (negatif), 1-5% (low), 6-49% (moderate), ≥50% (high). **Results and Discussion:** In this study, the ratio between male and female in ATC was equal (mean age 57.6 years). Anaplastic thyroid carcinoma typically exhibit a high grade carcinoma with necrosis (100%), lymphovascular invasion (69.2%), calcification (23%), perineural invasion (0.7%) and average lymphocyte tumor infiltration density (TIL's) was 13.84%. PD- L1 expression was found in 10 samples (76,9%) with an average TPS value of 20,76%. Most of the samples ATC express PD-L1 so that the immunotherapy with anti PD-L1 drugs is very promising as an adjuvant therapy for ATC. **Conclusion:** ATC typically exhibit a high grade carcinoma and have the PD-L1 expression with a moderate TPS value

Keywords : anaplastic, histopathology, PD-L1 expression, thyroid carcinoma

CORRELATION BETWEEN CXCR4 AND MMP-9 EXPRESSION WITH VARIOUS REGIONAL LYMPH NODE METASTICAL STATUS IN COLORECTAL ADENOCARCINOMA

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Background: Colorectal adenocarcinoma is a malignancy that attacks the colon and rectum area. The prognosis can be said to be poor if metastases are found. The discovery of a new biomarker to detect the presence of lymph node metastases is expected to accelerate optimal planning and management thereby improving the patient's prognosis. CXCR4 overexpression has been associated with angiogenic and chemotactic effects that may contribute to metastasis. MMP-9 is the most important enzyme and plays a key role in the degradation of the basement membrane and extracellular matrix that facilitates tumor cell invasion and proliferation in the metastatic environment. **Objective:** To analyze the relationship between CXCR4 and MMP-9 expression related to regional lymph node metastatic status in colorectal adenocarcinoma. **Methods:** An cross sectional methodology approach will be conducted on 32 formalin-fixed paraffin-embedded tissue of patients diagnosed with colorectal adenocarcinoma in the Anatomical Pathology Laboratory of Dr. Soetomo Hospital, in period from January 2016 until December 2020. The samples will be divided by random sampling technique into three groups based on the regional lymph node's metastatic status. The samples will be stained with immunohistochemistry for CXCR4 and MMP-9 antibodies.

Keywords: colorectal adenocarcinoma, CXCR4, lymph node metastastic status, MMP-9

CORRELATION OF VDR AND β-CATENIN EXPRESSION WITH T STAGE IN INVASIVE BREAST CARCINOMA OF NO SPECIAL TYPE

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Background: Breast cancer is the second leading cause of death in Indonesia and the most common malignancy among women. Prognosis of breast cancer is directly influenced by the size of the tumor (T stage), status of metastasis to the lymph gland and distant metastases to other organs. Vitamin D receptor (VDR) is a steroid hormone receptor found in almost 80% of breast cancer. VDR activation can inhibit proliferation and differentiation as well as enhancing breast cancer apoptosis. β-catenin protein plays an important role in the regulation of Wnt signaling which is often associated with increased tumor cell proliferation (T stage). VDR and β-catenin are involved in the proliferation of breast carcinoma cells, thereby affecting the aggressiveness of cancer. **Objective:** To analyze the correlation of VDR and β-catenin expression with T stage of invasive breast carcinoma of no special type. **Methods:** This research design is analytic observational study with cross sectional approach. Samples are paraffin blocks from invasive breast carcinoma of no special type patients who underwent modified radical mastectomy (MRM) in anatomical pathology laboratory, Dr. Soetomo General Academic Hospital throughout January 2019 until December 2022. The samples will be divided into four groups based on T stage. Immunohistochemistry examination will be performed using VDR and β-catenin antibodies. The difference of the expression and the correlation between them will be analyzed using statistical tests.

Keywords: breast cancer, invasive breast carcinoma of no special type, VDR, β-catenin, T stage

HIF-1α AND VEGF EXPRESSION IN ASTROCYTOMA IDH-MUTAN, GRADE 4 AND GLIOBLASTOMA IDH-WILDTYPE

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Background: High grade glioma is the most frequent primary brain tumor in adults. Astrocytoma, IDH-mutant, grade 4 and glioblastoma IDH-wildtype shared morphological characteristics. Angiogenesis is essential for tumor growth. The hypoxic area of the tumor enhances the expression of Hypoxia Inducible Factor-1α (HIF-1α), which in turn stimulates the expression of Vascular Endothelial Growth Factor (VEGF). **Objective:** The aim of this study is to compare the expression of HIF-1α and VEGF in astrocytoma, IDH-mutant, grade 4 and glioblastoma IDH-wildtype and understanding the correlation between HIF-1α and VEGF expression in both types of malignancies. **Methods:** An analytical observational study using a cross-sectional approach using a sample of all patients diagnosed with GBM morphologically during January 2014 – December 2020 at the Anatomic Pathology Laboratory of RSUD Dr. Sutomo Surabaya. Samples were grouped based on IDH1 status by immunohistochemical examination using IDH1 R132H antibodies, divided into astrocytoma IDH-mutant, grade 4 and glioblastoma IDH-wild-type, followed by HIF-1α and VEGF immunohistochemical examination. HIF-1α and VEGF expression will be assessed semi-quantitatively using the immunoreactivity score. The results of HIF-1α and VEGF expression weill be then analyzed statistically.

Keywords: astrocytoma IDH-mutant, glioblastoma IDH-wildtype, high grade glioma, HIF-1α, VEGF

CORRELATION OF CD44 AND β-CATENIN IN VARIOUS T STAGE IN UROTHELIAL CARCINOMA

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Background: Bladder cancer is the 10th most common cancer worldwide, with an increasing incidence in Indonesia. More than 90% of bladder cancer is urothelial carcinoma. One of the prognostic factors for urothelial carcinoma is T-stage. T-stage is a prognostic factor for urothelial carcinoma. The prognosis of patients with advanced urothelial carcinoma is poor and they often experience disease recurrence, one of which is resistance. CD44 is involved in the functions of cell growth, survival, resistance to apoptosis, and tumour invasion in urothelial carcinoma. β-catenin is an intracellular signal transducer in the Wnt signalling pathway and is involved in the transcription of genes responsible for cell proliferation and differentiation. The interaction of CD44 with hyaluronan and the β-catenin-activating Wnt pathway is involved in cell proliferation and tumor cell invasion, affecting the T stage and prognosis of urothelial carcinoma. **Objective:** This study aims to determine the correlation between CD44 and β-catenin expression with various T stage in urothelial carcinoma. **Methods:** This study is an analytic observational study with a cross-sectional approach. Samples were used as paraffin blocks of urothelial carcinoma preparations at the Anatomical Pathology Laboratory of Dr. Soetomo Hospital Surabaya from January 2014 to December 2022. Samples will be divided into T1, T2, T3, and T4 based on histopathological examination. Immunohistochemical examination using CD44 and β-catenin antibodies and differences in expression and correlation of both antibodies will be analyzed using statistical tests.

Keywords: bladder cancer, β-catenin, CD44, T stage

CORRELATION BETWEEN N-*CADHERIN* AND *MMP*-9 EXPRESSION WITH VARIOUS N STAGE RADIOLOGICALLY IN LARYNGEAL SQUAMOUS CELL CARCINOMA

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Background: Nodal metastases is an important prognostic factor in laryngeal squamous cell carcinoma. To ascertain the presence of nodal metastases, a particular biomarker evaluation is required. A mesenchymal marker called N-cadherin creates dynamic intercellular interactions that allow malignancies to spread to new locations. By inducing the spread of tumor cells from the main tumor and enhancing tumor cell motility, matrix metalloproteinase 9 (MMP-9) contributes to metastasis. **Objective:** To evaluate the discrepancies and interactions between the expression of N-cadherin and MMP-9 to different N stages based on radiological characteristics in patients with laryngeal squamous cell carcinoma. **Methods:** In Dr. Soetomo Hospital Anatomical Pathology from January 2018 to December 2021, a cross-sectional observational analytic study was conducted on formalin-fixed paraffin-embedded which histological diagnosis was laryngeal squamous cell carcinoma Samples were divided into N stages radiologically from CT scan. N-cadherin and MMP-9 antibodies used for immunohistochemistry, the variations and connection between them were analyzed statistically. **Results and Discussion:** There was no significant difference in N-cadherin expression at various N stages ($p > 0.05$). There was a significant difference in MMP-9 at various N stages ($p < 0.05$). There was no correlation between N-cadherin and MMP-9 expression at various N stages in laryngeal squamous cell carcinoma ($p > 0.05$). **Conclusion:** MMP-9 may be a predictor for nodal metastases in laryngeal squamous cell carcinoma. There was no difference in N-cadherin expression or connection with MMP-9 at the N stage.

Keywords: laryngeal squamous cell carcinoma, MMP-9, N-cadherin, N stages

CORRELATION BETWEEN EXPRESSION OF NF-κB p65 IN MACROPHAGES AND HSP70 IN TUMOR CELL WITH VARIOUS T STAGE ADENOCARCINOMA COLORECTAL

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Background: Free radicals and inflammation in tumor microenvironment are important aspects of tumor biological activity. They activated NF-κB p65 transcription factor pathway. HSP70 is chaperone protein that regulated host of imune response to cancer cells. NF-κB p65 and HSP70 expression is associated with poor prognosis and new targeted therapy in colorectal adenocarcinoma. **Objective:** This study aims to analyze correlation between NF-κB p65 expression in macrophages and HSP70 in tumor cells with various T stages of colorectal adenocarcinoma. **Methods:** This cross-sectional study was performed on 48 paraffin blocks from colorectal adenocarcinoma at the Anatomical Pathology Laboratory of Dr. Soetomo General Academic Hospital Surabaya from January 2015 to December 2019. The samples were divided into four groups based on T stages of colorectal adenocarcinoma. Immunohistochemical staining was performed to detect NF-κB p65 expression in nucleus or cytoplasm of macrophages and HSP70 in cytoplasm of tumor cells. **Results and Discussion:** There was no significant difference of NF-κB p65 expression percentage in macrophages at four groups (p=0.31). There was significant differences of HSP70 expression percentage in tumor cells at four groups (p=0.014). There was no correlation between NF-κB p65 expression in macrophages and HSP70 expression in tumor cells with various T stages of colorectal adenocarcinoma (rs=0.05, p=0.97).

Keywords: HSP70, NF-κB p65, T stages of colorectal adenocarcinoma

COMPARATION BETWEEN LMP1 EXPRESSION AND CLINICOPATHOLOGICAL CHARACTERISTICS OF INVASIVE BREAST CARCINOMA IN Dr. KARIADI GENERAL HOSPITAL

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Background: Invasive breast carcinoma is the most common malignancy in women and occurs as a multifactorial process in which Epstein-Barr virus (EBV) infection has recently been investigated as a risk factor. Previous studies stated that 30-50% of breast cancers are EBV positive. EBV infection is indicated by the expression of latent genes produced including LMP1 as an oncogenic protein through various mechanisms such as increasing survival, tumor cell proliferation, inhibiting apoptosis, and increasing metastasis. Several studies have also stated that breast carcinoma with EBV expression has more aggressive characteristics. Several clinicopathological characteristics affect the prognosis of breast carcinoma include age, tumor size, grade of malignancy, estrogen receptor (ER) status, progesterone receptor (PR) status, HER2 expression, Ki67 index and lymph node involvement. Only few studies were done on EBV infection in breast carcinoma in Asian countries including Indonesia. **Objective:** To analyze the relationship between LMP1 expression and the clinicopathological characteristics of invasive breast carcinoma. **Methods:** Cross-sectional study on paraffin-embedded tissues from patients previously diagnosed as invasive breast carcinoma at Dr. Kariadi general hospital was done during June till September 2019. LMP1 expression was analyzed based on immunostaining of 78 tissues. The clinicopathological datas were tumor size, grade of malignancy, ER status, PR status, HER2 expression, Ki67 index and involvement of the ipsilateral axillary lymph nodes. All datas were analyzed using correlation test and SPSS for Windows version 17.

Keywords: clinicopathological characteristics, invasive breast carcinoma, LMP1

CLINICOPATHOLOGICAL APPROACH TO THE DIAGNOSIS OF HG-ESS IN YOUNG WOMEN, A CASE SERIES FROM A CANCER CENTER

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Background: HG-ESS is a rare tumor that is particularly common in young women. This case series describe the clinicopathological approach of HG-ESS diagnosis, higlighting the use of ancillary techniques in pathology. **Case Description:** The three patients in this case series were 50, 47, and 16 years old at the time of diagnosis. All patients had undergone histological examination at a prior hospital before being referred to the Dharmais Cancer Center Hospital. All cases were reviewed histologically and then proceed to immunostaining. Radiological examinations were performed at the Dharmais Cancer Center Hospital to establish the staging of the HG-ESS. Immunohistochemical examinations were positive for cyclinD1 in all patients. Patient one was also positive for vimentin and CD10. Patients two and three were positive for SMA respectively. **Discussion and Conclusion:** Immunohistochemical (IHC) staining is a reliable method for identifying low-grade and high-grade endometrial stromal sarcomas. However, histological examination is still commonly performed in rural areas. The three cases in this study demonstrate that younger patients with HG-ESS tend to have a worse prognosis than older patients. This is likely because young women may experience regular menstruation, which can mask the symptoms of the tumor. As a result, these tumors may be detected at a later stage, when they are more advanced and difficult to treat. Patients with convincing symptoms and signs that support radiological examination, particularly young women, should be considered for a diagnosis of HG-ESS.

Keywords: HG-ESS, irregular bleeding, immunohistochemical, young woman

ASSOCIATION OF TOPK AND STAT3 IMMUNOEXPRESSION WITH PROSTATE ADENOCARCINOMA METASTASIS

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Background: Prostate carcinoma (PC) is the fifth most common malignancy in men and the fifth mortality in Indonesia. At initial diagnosis, 50% of patients present with metastatic in Indonesia. Although metastatic is a major cause of cancer therapy failure and death, the metastatic pathogenesis is still poorly understood. Treatment of advanced and metastatic PC is currently constrained by drug resistance, therefore understanding the metastatic pathogenesis process is compulsory. T-lymphokine-activated killer-cell-originated protein kinase (TOPK) is an enzyme that plays a role in metastatic, mainly in Epithelial Mesenchymal Transition (EMT) and tumour invasion. Signal Transducer and Activator of Transcription (STAT)3 is a transcription factor involved in many tumour types promotes transformation, survival, proliferation, invasion, and metastatic. The role of TOPK and STAT3 immuno-expression has not been widely studied in the pathogenesis of prostate adenocarcinoma (AP) metastatic. **Objective:** This study aims to analyse the association between TOPK and STAT3 immuno-expression in the AP metastatic pathogenesis. **Methods:** This is a cross-sectional and observational analytic study. Total samples are 60, consisting 30 samples metastatic and 30 samples non-metastatic. Study samples are Formalin Fixed Paraffin Embedded (FFPE) blocks of AP patients available at the Department of Anatomical Pathology, Dr. Hasan Sadikin Hospital (RSHS) with metastatic status (spread to bone/lung/hepatic/brain/non-regional lymph nodes) or no spread which collected from RSHS medical records period 2016-2023. All samples were immunohistochemically stained with TOPK and STAT3 and then evaluated. The data calculated with chi-square test and if significant, continued by multivariate analysis.

Keywords: metastasis, prostate adenocarcinoma, STAT3, TOPK

ACCURACY OF FINE NEEDLE ASPIRATION BIOPSY AND HISTOPATHOLOGICAL EXAMINATION AS A DIAGNOSTIC TOOL OF SALIVARY GLAND TUMORS AT ANATOMICAL PATHOLOGY INSTALLATION DR SAIFUL ANWAR HOSPITAL MALANG PERIOD 2018-2022

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Background: Salivary gland tumors are a rare group of heterogenous histologies located in the parotid, submandibular, sublingual, and minor salivary glands of the upper aerodigestive tract. Fine needle aspiration biopsy (FNAB) is well accepted as a safe, reliable, minimal invasive and cost-effective method. FNAB aims to assist the clinician in the management of patients. **Objective:** The purpose of this study was to evaluate the validity of FNAB as a diagnostic tool in salivary gland tumors with histopathological examination in period of 2018-2022 at Dr. Saiful Anwar Hospital Malang. **Methods:** FNAB examination was carried out before surgery, then compared with the histopathological results as gold standar after surgery and reviewed retrospectively. Both FNAB results and histopathological results were classified as neoplasm or non neoplasm and benign or malignant. Validity is determined from sensitivity, specificity, positive predictive value, negative predictive value and accuracy. **Results and Discussion:** There were 33 cases of salivary gland tumor in periode of 2018-2022 respectively reviewed. The sensitivity, specificity, accuracy, positive predictive value, and negative predictive value of FNAB cytology diagnoses for salivary gland tumor to determined neoplasm or non neoplasm were 93,1%, 100%, 93,9%, 100%, 66,7% and determined benign or malignant were 94,4%, 88,9%, 92,6%, 94,4%, 88,9% . This study indicated that FNA cytology of salivary gland is a reliable and highly accurate diagnostic method for diagnosis of salivary gland lesions. **Conclusion:** FNAB is a useful tool in the management of salivary gland tumors but can not as a substitute for histopathology diagnostic.

Keywords: accuracy, FNAB, histopathology, salivary gland

CORRELATION BETWEEN EMMPRIN AND *β-CATENIN* EXPRESSION WITH VARIOUS T STAGES OF COLORECTAL ADENOCARCINOMA

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Background: Colorectal cancer is the third most prevalent malignant tumor and the second leading cause of mortality around the globe. The majority of colorectal malignancies (98%) are adenocarcinomas. One of its prognostic factor is TNM staging. T stage in colorectal adenocarcinoma is determined by the depth of tumor invasion. Various proteins play role in this process. EMMPRIN is expressed on the surface of malignant cells and act as a mediator of tumor cell invasion. Increased β-Catenin levels promote tumor cell proliferation, migration, and invasion. **Objective:** To analyze the correlation between EMMPRIN and β-Catenin expression with various T stages of colorectal adenocarcinoma. **Methods:** This observational analytic study with cross sectional design is performed on 54 paraffin blocks of colorectal adenocarcinoma during period of January 2018 to December 2022 in Anatomical Pathology Laboratory in RSUD dr. Soetomo. Immunohistochemistry for EMMPRIN and β-Catenin expressions are conducted and the data obtained is statistically analysed.

Keywords: adenocarcinoma colorectal, β-Catenin, colorectal cancer, EMMPRIN, T stage

ASSOCIATION BETWEEN CDK4 IMMUNOHISTOCHEMICAL EXPRESSION AND CLINICOPATHOLOGICAL CHARACTERISTICS OF ATYPICAL LIPOMATOUS TUMOR/WELL-DIFFERENTIATED LIPOSARCOMA CASES AT DR. KARIADI CENTRAL GENERAL HOSPITAL SEMARANG

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Background: Liposarcoma, a malignancy of adipose tissue, is the most common soft tissue sarcoma diagnosed in adults. Atypical lipomatous tumor/well-differentiated liposarcoma comprises 40-45% of all liposarcoma cases. The underlying genetic abnormality in ALT/WDLPS involves 12q14-q15 chromosomal amplification, with MDM2 amplification (12q15) as the primary driver of tumorigenesis, and CDK4 (12q14.1) is frequently coamplified alongside MDM2. Though CDK4 is known to be a diagnostic marker for ALT/WDLPS, studies have also shown its association with clinicopathologic features in ALT/WDLPS patients. However, the immunohistochemical expression of CDK4 and its association with clinicopathological characteristics of ALT/WDLPS cases in Indonesia, especially in Dr. Kariadi Central General Hospital, have not yet been studied. **Objective:** This study aims to analyze the association between immunohistochemical expression of CDK4 and clinicopathological characteristics of ALT/WDLPS cases in Dr. Kariadi Central General Hospital. **Methods:** This study is observational analytic with a cross-sectional design using paraffin block and slide samples from patients with histopathological diagnosis of ALT/WDLPS in Dr. Kariadi Central General Hospital from January 2019 to June 2023. Primary data of CDK4 immunohistochemical expression and secondary data of clinicopathological characteristics from patients' medical records, such as age, gender, anatomical location, tumor size, grading, and histological subtype will be obtained and statistically analyzed to determine the association between CDK4 expression and patient clinicopathological characteristics.

Keywords: atypical lipomatous tumor, CDK4, clinicopathological characteristics, well-differentiated liposarcoma

UNRAVELING INVASIVE BREAST CARCINOMA OF NO SPECIAL TYPE WITH NEUROENDOCRINE DIFFERENTIATION : IS IT IMPORTANT ?

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Background: Neuroendocrine (NE) differentiation in breast cancer has been acknowledged since 1963, although hindered by frequently changing terminology and diagnostic criteria. Invasive Breast Carcinoma of No Special Type with neuroendocrine differentiation (IBC-NST-NE) is diagnosed by identifying the presence and extent of NE features in the invasive cancer. Reported incidence varies from <1% to 19.5%. This case report present IBC-NST-NE and highlight the importance of establishing this diagnosis. **Case Description:** A 75-year-old woman presented a year-old left breast lump that enlarged over 3 months. Multiple ulceration and bloody nipple discharge were also found. Needle biopsy confirmed invasive ductal carcinoma. A radical mastectomy revealed a 7,5x7,3x4,9 cm, gray-white, lobulated mass with indistinct borders. Histopathology identified invasive ductal carcinoma with 30% exhibiting NE features—arranged in insular, trabecular and pseudorosette pattern, composed of polygonal cells with granular cytoplasm and salt-and-pepper nuclear chromatin. Positive synaptophysin and chromogranin A confirmed the NE component. **Discussion and Conclusion:** There is no specific radiological or clinical finding to diagnose NE differentiation in IBC. In IBC, NE immunohistochemistry is performed only if suggestive cytomorphologic of NE features are present. Synaptophysin and chromogranin are highly sensitive and specific marker, positive in 30% area of our case's tumor. Therapy of IBC-NST-NE follow standard IBC protocol, however it tends to have shorter disease-free survival , poorer survival rate, higher distant metastasis rates and higher TNM stage at diagnosis compared to non-NE IBC. Diagnosing IBC-NST-NE is important for prognosis and increasing number of reported cases will enhance our understanding of neuroendocrine tumor behaviour in breast cancer.

Keywords : immunohistochemistry, invasive breast carcinoma, neuroendocrine

CORRELATION BETWEEN TUMORAL HER2 AND INTRATUMORAL LYMPHOCYTE T CD 8+ WITH OVERALL SURVIVAL OF UROTHELIAL CARCINOMA BLADDER PATIENTS AT DR. KARIADI GENERAL HOSPITAL, SEMARANG

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Background: Urothelial carcinoma with amplification or over expression of HER-2 protein, affect tumor behaviour and become more agresive. Lymphocyte infiltrating tumor with certain population can affect tumor microenvironment and determine risk stratification and therapeutic success, on which affect the overall survival of urinary bladder urothelial carcinoma with their respective clinicopathological characteristic. Many studies have various results using different ways of research methods and statictical analysis. **Objective:** The study aimed to prove the relation between HER2 and tumoral CD 8+ expression with the overall survival of urothelial carcinoma. **Methods:** Using an analytic observational study with a cross sectional design and consecutive sampling, numbers of 60 paraffin-embedded tissues and medical records of urinary bladder urothelial carcinoma from Dr. Kariadi General Hospital are collected. The data were age, sex, tumor location, histological type, tumor stage, grade, tumoral HER2 expression, intratumoral Lymphocyte CD 8+ expression. To determine HER2 and CD8+ expression, we use immunohistochemistry technic. Scoring of Her2 are categorized into overexpression (+++), equivocal (++) and negative (+/-), whereas percentage of CD8 would be examined in the intratumor areas. Overall 3 years survivals are measured using Kaplan-Meier and Chi-square analysis for their differences.

Keywords: CD 8 expression, clinicopathological characteristics, HER2 expression, urothelial carcinoma

THE RELATIONSHIP BETWEEN IMMUNOEXPRESSION PARP-1 AND BACH 1 WITH LYMPH NODE METASTASES IN BREAST CARCINOMA OF *LUMINAL SUBTYPE A-LIKE*

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Background: Breast carcinoma is the most frequently diagnosed malignancy and the second leading cause of death among women. It has different histopathological characteristics and is divided into five molecular subtypes. The luminal A-like subtype of breast carcinoma was previously believed to have the best prognosis, but some cases have a poor prognosis. The metastasis of breast cancer to the lymph nodes is a crucial factor in determining prognosis. The overexpression of PARP-1 and BACH1 is known to play a role in the metastatic process of carcinoma. Hormonal therapy for the luminal A-like subtype of breast cancer has not been effective in some cases. **Objective:** This study aims to investigate the correlation between PARP-1 and BACH1 immunoexpression in patients with metastasized luminal A-like subtype breast carcinoma to lymph nodes, to identify early treatment options. **Methods:** This study is an observational analysis with a cross-sectional design, based on secondary and retrospective data from 40 patients diagnosed with either metastatic or non-metastatic luminal A-like subtype breast carcinoma at RSUP Dr. Hasan Sadikin Bandung between July 2018 and July 2023. The study examined the immunoexpression of PARP-1 and BACH1 by assessing intensity and distribution to determine histoscore, which was then categorized as low or high immunoexpressed based on certain criteria. The objective was to investigate the correlation between PARP-1 and BACH1 immunoexpression and lymph node metastases in the luminal A-like subtype of breast carcinoma using Chi-square analysis.

Keywords: BACH1, lymph node metastases, luminal A-like subtype of breast carcinoma, PARP-1

ASSOCIATION BETWEEN MMR (MISMATCH REPAIR) EXPRESSION WITH CLINICOPATHOLOGICAL CHARACTERISTICS OF COLORECTAL CARSINOMA PATIENTS DR. KARIADI CENTRAL GENERAL HOSPITAL SEMARANG

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Background: Colorectal carcinoma, according to data Globocan, is the third most common cancer diagnosis globally. Prognostic factors of colorectal carcinoma are predicted by histopathological parameters. There is diversity of prognostic results with same stage and grading that affects inaccuracy predicting mortality risk. DNA mismatch repair (MMR) plays a role in the prognostic outcome of colorectal carcinoma. Colorectal carcinoma is associated with 10-20% impaired DNA MMR gene function. Its deficiency causes genetic instability changes in the sequence of the short long arm of DNA, called microsatellite instability (MSI). MSI testing uses polymerase chain reaction (PCR), but this method is expensive and complicated. There is another cheaper and easier test, which is immunohistochemistry. Immunohistochemistry can prove the presence of mismatch repair deficiency. There are not many studies in Indonesia regarding mismatch repair gene deficiency associated with microsatellite instability which is related to prognostic factors and therapy in colorectal carcinoma patients, especially at Dr. Kariadi Central General Hospital. **Objective:** To analyze the association between MMR expression and clinicopathological characteristics of colorectal carcinoma patients at Dr. Kariadi Central General Hospital. **Methods:** This study is observational analytic with cross-sectional research design using paraffin block and slide samples from colorectal carcinoma patients at Dr. Kariadi Central General Hospital from January 1, 2020 to December 31, 2022. The sampling method used is consecutive sampling. The data collected were primary data on MMR expression results and secondary data on clinicopathological characteristics from patient medical records, age, gender, and tumor metastasis.

Keywords: clinicopathologic characteristics, colorectal carcinoma, mismatch repair

RELATIONSHIP BETWEEN CDK4 EXPRESSION AND CLINICOPATHOLOGICAL PARAMETERS IN RHABDOMYOSARCOMA PATIENTS

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Background: Rhabdomyosarcoma is a malignant mesenchymal tumor with skeletal muscle differentiation. This disease is rare, but is the most common among soft tissue malignancies, can occur in various age ranges, most common in children aged 2-6 years, 75% of cases in males, depending on the subtype has a different epidemiological picture and prognosis . In the study it was found that in rhabdomyosarcoma patients there was an amplification of chromosome 12q13-15 thereby increasing the work of the CDK4 coding gene. The CDK4 enzyme will bind to cyclin D, assisted by the CDK2-cyclin E complex to phosphorylate the protein produced by the retinoblastoma gene (Rb) which results in activation of transcription factor E2F and activation of DNA replication. CDK4 also has the ability to positively regulate and phosphorylate PAX3-FOXO1, which plays a role in the proliferation and differentiation block of m lineage. The effect of increasing CDK4 activity is thought to be related to clinicopathological parameters. **Objective:** This study aims to analyze the relationship between CDK4 expression and the clinicopathological features of rhabdomyosarcoma patients. **Methods:** This is an observational analytic study with a retrospective cohort design involving 35 rhabdomyosarcoma patients diagnosed between January 2020 and December 2022. Data collected consisted of age, sex, rhabdomyosarcoma subtype, mean survival rate, and CDK4 expression read by two pathologists. Data analysis used the Chi square test.

Keywords: CDK4 expression, clinicopathological parameters, rhabdomyosarcoma

ANALYSIS OF CD44 AND EMMPRIN EXPRESSION IN MUCINOUS OVARIAN TUMORS

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Background: Mucinous ovarian carcinoma (MOC), part of mucinous ovarian tumor (MOT) occurs in a small number of all ovarian epithelial malignancies, however its prevalence is greater in Indonesia. MOT give several kinds of diagnostic difficulties, especially differentiating mucinous borderline tumor (MBOT) from MOC grade 1 and, on rare occasions, mucinous cystadenoma (MAC). The process of carcinogenesis in ovarian cancer comprises the control of proliferation and invasion. CD44 is a proliferation marker, while EMMPRIN is a invasion marker. **Objective:** To analyze CD44 and EMMPRIN expression in MOT. **Methods:** An analytical retrospective study was conducted using paraffin blocks from patients with a diagnosis of MOT at Dr. Soetomo General Academic Hospital Surabaya's Anatomical Pathology Laboratory for the period 2018 to 2021, which were grouped into three categories: 18 paraffin blocks of MCA, 17 paraffin blocks of MBOT and 18 paraffin blocks of MOC grade 1. The semi-quantitative immunohistochemical approach was used to assess CD44 and EMMPRIN expression. **Results and Discussion:** CD44 expression on MOT did not differ ($p<0.05$), in particular, CD44 expression differed remarkably between MAC and MBOT ($p<0.05$), in spite of no correlation ($p>0.05$). These findings are comparable to those of Matuura et al., which showed differences in CD44 expression in MOT. EMMPRIN expression was neither different nor correlated in MOT ($p>0.05$). In MOT, CD44 expression has a weakly positive correlation with EMMPRIN expression. ($p<0.05$). **Conclusion:** The expression of CD44 differed between MCA and MBOT.

Keywords: CD44, EMPPRIN, ovarian tumor, mucinous

HIV-ASSOCIATED CYTOMEGALOVIRUS INFECTION MIMICKING SUBMANDIBULA NEOPLASM: A DIAGNOSTIC DETECTED BY CYTOLOGY

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Background: Cytomegalovirus (CMV) infection is the most common opportunistic viral infection associated with HIV infection. Though CMV has been described in every organ system, descriptions of CMV-induced mass lesion in submandibula are hard to find. Here we report a case with submandibula lesion associated with cytomegalovirus. **Case Description:** A 23 year old man came to the hospital with complaints of a lump in the submandibular area since 1 month ago. The patient's medical history was an HIV, patient taking antiretroviral therapy for the last 3 years. Clinical laboratory examination showed reactive anti-CMV IgG (271 U/ml), decreased CD 4 percentages of lymph (4%) and CD4 absolutes counts (362 cells/µliter). The patient was referred to anatomical pathology for fine needle aspiration biopsy. The microscopic picture shows the distribution of inflammatory cell, among them were cells with a cytopathic effect. The cytoplasm is abundant with reddish granules in the intracytoplasm. Cell nucleus with intranuclear inclusions and clear halo. Regular nuclear membrane with thickening. So we concluded that fine needle aspiration cytology in the submandibula is suppurative granulomatous inflammation with cytopathic effect due to CMV infection. **Discussion and Conclusion:** Almost 100% of homosexual men are CMV IgG positive and it seems likely that CMV disease in patients with AIDS represents reactivation of latent infection. We have described a submandibular mass lesion caused by CMV infection in a patient with HIV detected by cytology. This infection should be considered in the differential diagnosis of a neoplasm in these immunocompromised patients.

Keywords: cytomegalovirus, cytology, HIV, submandibula

CORRELATION BETWEEN CD44 AND CDK4 EXPRESSION WITH T STAGE OF PAPILLARY THYROID CARCINOMA

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Background: Papillary thyroid carcinoma is the most common endocrine malignancy, with global insidence numbers rising rapidly. PTC prognosis is determined by patient's age, size of the tumor, local invasion and metastasis. Size of the tumor is determined by the rate of proliferation, in which Cancer Stem Cells, such as CD44 is the main driver of cell proliferation. CD44 is responsible for activating different pathways for cell proliferation, in which would regulate the protein such as Cyclin-Dependent Kinase 4 (CDK4), that is responsible for cell division, causing tumor size enlargement, ultimately altering disease progression. **Objective:** The aim of the study is to analyze the correlation between the expression of CD44 and CDK4 with T-stage of papillary thyroid carcinoma. **Methods:** This research is an analytic observational study with cross sectional approach. The samples are paraffin embedded tissue from patients with the diagnosis of papillary thyroid carcinoma that underwent *lobectomy, isthmolobectomy* and total *thyroidectomy* from January 2019 to December 2022. The samples would be divided into groups according to the T stage. Immunohistochemistry will be done using CD44 and CDK4 antibodies. The difference between the expression and then correlation between them will be analyzed using statistical tests.

Keywords: CD44, CDK4, papillary thyroid carcinoma, thyroid cancer, T stage

CORRELATION OF TUMOR-INFILTRATING LYMPHOCYTES (TILS) WITH GRADING ON CERVICAL CARCINOMA AT HASAN SADIKIN HOSPITAL BANDUNG FROM 2020 TO 2023

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Background: Cervical cancer was the fourth most common cancer in woman globally, dominated by HPV infection. TILs are an important biological and prognostic marker in solid cancers, including cervical carcinoma. The higher number of lymphocytes around cancer cells indicates that the patients immunity is adequate. **Objective:** To analyze correlation between TILs and grading cervical carcinoma. **Methods:** This study is a cross-sectional design with retrospective secondary data of cervical carcinoma cases from 2020-2023. The assessment of TILs was carried out through H&E examination using the recommendations of TILs working group 2014 and categorized as low (<10%), intermediate (11-40%) and high (>40%). The assessment was carried out on the peritumoral, with five fields of view using magnification of 400x. **Results and Discussion:** There were 24 cases of cervical carcinoma. The histopathological features of cervical carcinoma consists of squamous cell carcinoma (SCC) 16 cases (66,7%), adenocarcinoma 4 cases (16,7%), and endometrioid adenocarcinoma 4 cases (16,6%). The most common grading is low grade 19 cases (79,2%) and high grade 5 cases (20,8%). In this study, high TILS was found in SCC (p=0.378), in low-grade tumor (p=0.661), and the age range of 45-60 years (p=0.692). **Conclusion:** Based on this study, TILs were not associated with grading cervical carcinoma.

Keywords: cervical cancer, tumor grading, TILs

THE ASSOCIATION OF LAMC2 IMMUNOEKSPRESSION AND TUMOR BUDDING WITH REGIONAL LYMPH NODE METASTATIC IN ADENOCARCINOMA COLORECTAL

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Background: Colorectal carcinoma is the third most common malignancy and the second most deadly cancer in the world. Colorectal adenocarcinoma is a malignant epithelial tumor originating from the colon, with glandular or mucous differentiation. Colorectal carcinoma is one of the malignancies that undergoes partial-EMT. One of the genes in partial-EMT is laminin γ2 (LAMC2). Tumor budding (TB) in some studies was associated with partial-EMT. LAMC2 is associated with metastasis, recurrence, and poor prognosis. TB is associated with lymph node metastasis, locoregional recurrence, and overall survival (OS). The patient's choice of treatment will be based on the site and stage at diagnosis. Immunohistochemical examination of LAMC2 and tumor budding would predict metastasis, which can help clinicians in determining patient management. **Objective:** This study aimed to analyze the relationship between LAMC2 immunoexpression and tumor budding to regional lymph node metastasis in colorectal adenocarcinoma. **Methods:** This is a cross-sectional study with 44 cases diagnosed as colorectal adenocarcinoma from the metastasized and non-metastasized groups at Dr. Hasan Sadikin Hospital Bandung in the period 2018-2022. LAMC2 expression and tumor budding score calculation with cytokeratin (CK) expression were assessed by immunohistochemical examination and evaluated. The data obtained were subjected to statistical tests with chi-square calculations and if significant, ordinal logistic regression calculations were performed.

Keywords: colorectal adenocarcinoma, cytokeratin, LAMC2, regional lymph node metastasis, tumor budding

CORRELATION BETWEEN PD-L1 AND IL6, EGFR, STAT3 IMMUNOEXPRESSIONS IN OSTEOSARCOMA PATIENTS

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Background: Osteosarcoma is one of the most common primary bone malignancies. Current therapeutic modalities only yield 5 year-survival-rate of 50-70%, which has remained stagnant. High incidence of metastasis and recurrence also drastically lower survival. Novel treatment is urgently needed to improve prognosis. Recent studies using immune checkpoint inhibitors (ICIs) such as anti-programmed cell death-1 and its ligand (PD-1 and PD-L1) has shown promising results in various cancers. However, its utilization in osteosarcoma has not yield favorable results, even though literatures showed that PD-L1 expression is significantly correlated with poor prognosis. PD-L1 regulation in osteosarcoma is still poorly understood, whereas knowledge of immunogenomic landscape and tumor microenvironment (TME) may hold the key in optimizing treatment. Several studies show that combination ICIs and TME modulation have yielded favorable results. One of PD-L1 regulatory pathways based on studies in other cancers is Epithelial Growth Factor Receptor (EGFR) – Interleukin-6 (IL6) – Signal Transducer and Activator of Transcription-3 (STAT3) pathway. In osteosarcoma, there are studies showing IL6, STAT3, and EGFR activation separately in relation to PD-L1, but there are no studies examining them simultaneously. **Objective:** This study aims to assess the correlation between immunoexpressions of PD-L1 and IL6, EGFR, STAT3 in osteosarcoma. **Methods:** This is a cross-sectional study conducted in the Anatomical Pathology Department of Saiful Anwar General Hospital. Immunohistochemistry using PD-L1, IL6, EGFR, and STAT3 will be performed on paraffin blocks of osteosarcoma patients from 2019-2023. Statistical analysis will be performed to assess the correlation between immunoexpressions of PD-L1 and IL6, EGFR, STAT3.

Keywords: EGFR, IL6, osteosarcoma, PD-L1, STAT3

THE PROGNOSTIC VALUE OF TUMOR-INFILTRATING LYMPHOCYTES IN TRIPLE-NEGATIVE BREAST CANCER TREATED WITH ADJUVANT CHEMOTHERAPY

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Background: Triple-negative breast cancer (TNBC) is a type of breast cancer that makes up 15-20% of all breast cancer cases. TNBC is defined by the lack of certain proteins, estrogen receptor (ER), progesterone receptor (PR), and HER2. TNBC is known to be more aggressive and harder to treat than other types of breast cancer. Recent studies have shown that the presence of tumor-infiltrating lymphocytes (TILs) treated with chemotherapy may be able to predict clinical outcomes for TNBC patients. Also, TILs are associated with higher rates of pathologic complete response in the neoadjuvant setting and overall survival in the adjuvant setting. However, there have been limited studies on TILs in Indonesian TNBC patients, so further research is needed to evaluate their prognostic value and role in predicting overall survival. **Objective:** This study aims to determine the prognostic value of TILs in patients with triple-negative breast cancer (TNBC) treated with adjuvant chemotherapy at Dr. Sardjito Hospital in Yogyakarta, Indonesia. **Methods:** In a retrospective study, the medical records and pathological sections of 56 patients with TNBC who underwent adjuvant platinum and non-platinum-based chemotherapy at Dr. Sardjito Hospital from 2015 to 2020 were reviewed. The assessment and quantification of TILs were conducted using hematoxylin and eosin (H&E) staining based on the criteria of an International TILs Working Group. To compare patients' overall survival (OS) based on TILs level, the log rank test was used for both univariate and multivariate analyses.

Keywords: overall survival, prognostic factor, TNBC, tumor-infiltrating lymphocytes

CORRELATION BETWEEN RAD50 IMMUNOEXPRESSION AND TUMOR INFILTRATING LYMPHOCYTES IN OVARIAN HIGH GRADE SEROUS CARCINOMA PLATINUM CHEMOTHERAPY RESPONSE

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Background: Ovarian High Grade Serous Carcinoma (HGSC) is the most common subtype of ovarian carcinoma and has poor prognosis. First line chemotherapy of HGSC is Platinum based chemotherapy which gave good result initially, but often developed platinum resistance. Several studies had shown that BRCA mutation causing homolog recombinant deficiency (HRD) which influence tumor microenvironment while affecting the number of Tumor Infiltrating Lymphocytes (TILs) that correlates with platinum-based chemotherapy sensitivity. There was no study of biomarkers which could predict sensitivity of platinum-based chemotherapy. The mechanism of Rad50 protein as homolog recombinant sensor in DNA damage repair pathway potentially useful for predicting chemotherapy response of platinum based. Intratumoral TILs also has a role in platinum-based chemotherapy sensitivity response and patient survival rate. **Objective:** This study aims to analyse correlation between Rad50 protein and TILs with chemotherapy status and correlation between Rad50 protein and TILs in HGSC. **Methods:** This is an observational analytics study with case control and retrospective secondary data sampling. Minimal total sample is 60 divided into 2 groups equally which is chemotherapy sensitive and resistance group. Patients diagnosed with HGSC histomorphologically and confirmed with immunohistochemistry which underwent chemotherapy then will be stained with Rad50 and CD3 immunohistochemistry. The collected data will be calculated by chi-square and binary logistic regression.

Keywords: chemotherapy response, high grade serous carcinoma, Rad50, TILs

ACCURACY OF FROZEN SECTION AND HISTOPATHOLOGICAL EXAMINATION OF MUSCULOSKELETAL TUMORS IN THE ANATOMICAL PATHOLOGY LABORATORY DR SAIFUL ANWAR HOSPITAL MALANG PERIOD 2020-2022

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Background: Frozen section and intraoperative cytology examinations for musculoskeletal tumors are quite necessary, mainly to find out whether a representative specimen can be obtained for a definite diagnosis. Apart from that, it can also be done to determine the radicality of the surgery However, intraoperative pathological examination in musculoskeletal tumours cases as a difficult diagnostic interpretation, one of which may be due to the morphological features of some musculoskeletal tumors are being difficult to differentiate. **Objective:** To determine the diagnostic accuracy of frozen section and histopathological examination of musculoskeletal tumors. **Methods:** This study uses a retrospective diagnostic test method which presents the accuracy of frozen section examination compared with histopathological examination as the gold standard in musculoskeletal tumors by determining the sensitivity, specificity, positive predictive value (ppv), negative predictive value (npv) diagnostic accuracy of musculoskeletal tumors in the Anatomical Pathology Laboratory of Dr. Saiful Anwar Hospital Malang. **Results and Discussion:** The diagnostic accuracy of frozen section and histopathology examination is 96% with a sensitivity value of 93%, specificity 100%, npp 100%, npn 91.6%. The diagnostic accuracy of imprint cytology and histopathology is 93.7% with a sensitivity value of 93%, specificity 100%, npp 100%, npn 83.3%. The accuracy of intraoperative frozen section and cytology examinations may be influenced by the pathologist's experience, sampling techniques, tissue processing preparations, and the characteristics of the tumor cells themselves. **Conclusion:** Intraoperative pathological examination can be used as an accurate examination method for musculoskeletal tumours cases.

Keywords: diagnostic accuracy, frozen section, histopathology, musculoskeletal tumors

CYCLOOXIGENASE-2 (COX-2) EXPRESSION IN COLORECTAL CANCER AND IT'S RELATIONSHIP WITH HISTOLOGICAL GRADE, REGIONAL LYMPH NODE METASTASIS, AND DEPTH OF TUMOR INVASION

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Background: Colorectal cancer is malignancy that originates from epithel colon or rectum. The carcinogenesis has many pathways and one of them involves arachidonic acid metabolism which involves enzyme cyclooxigenase-2 (COX-2). COX-2 expression is associated with apoptosis inhibition, increased metastatic potential, and increased neoangiogenesis associated with aggressiveness and prognosis. Because COX-2 has a role in colorectal cancer carcinogenesis, this study wanted to determine expression of COX-2 in colorectal cancer and its relationship with histological grade, regional lymph nodes metastasis and depth of tumor invasion. **Objective:** To determine COX-2 expression in colorectal adenocarcinoma and it's correlates with histological grade, regional lymph node metastasis and depth of tumor invasion. **Methods:** This study used analytic observational design, conducted in October 2023-February 2024. The location is in the Anatomical Pathology Installation of RSUD dr. Saiful Anwar Malang. The research samples is paraffin block from colorectal adenocarcinoma surgery cases in 2021-2023, totaling 30 samples. COX-2 expression counting in 1000 cells from 5 large visual fields stained in cytoplasm, then totaled and averaged and expressed as a percentage. The scoring of staining area is expressed as score 0 (0%) not expressed, score 1 (1-25%) lack expressed, score 2 (26-100%) overexpressed. Histological grade divided into low grade and high grade. Regional lymph node metastases are categorized as N1 (1-3 KGB), N2 (4-10 KGB). The depth of tumor invasion is categorized as T1 (submucosa), T2 (muscularis propria), T3 (penetrating serosa), T4 (surrounding organs).

Keywords: colorectal cancer, COX-2, prognosis.

ANALYSIS OF IMMUNOEXPRESSION OF THYMINE DIMERS (TT-CPDS) AND P16^{INK4A} IN OCULAR SURFACE SQUAMOUS NEOPLASIA (OSSN)

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Background: Ocular surface squamous neoplasia (OSSN) is an entity that comprises the spectrum of squamous neoplasms of conjunctiva and cornea, can range from conjunctival squamous intraepithelial neoplasia (CSIN) consist of low, moderate, severe dysplasia to squamous cell carcinoma (SCC). OSSN is an essential pathological entity due to its common clinical symptoms and signs with conjunctival or corneal disorders, such as pingecula, pterygium, conjunctival granuloma, and cysts. OSSN is potentially causing vision impairment or death, as such the pathogenesis of OSSN must be clearly understood. The suspected primary etiology of OSSN is (ultraviolet) UV exposure and/or Human papillomavirus *(*HPV) infection. The immunoexpression of TT-CPDs as a marker of UV exposure and p16^{Ink4a} as a marker of HPV. Both markers have not been studied in OSSN extensively before. The results of this study are expected to be used as evidence for pathogenesis, treatment and prevention of OSSN. **Objective:** This study aims to analyze the relationship between the immunoexpression of TT-CPDs and p16^{Ink4a} at various histopathological degrees of OSSN. **Methods:** This is a cross-sectional study with a minimum of 60 samples that were diagnosed with OSSN at PMN RSM Cicendo, Bandung from 2019 to 2022. The TT-CPDs and p16^{Ink4a} is assessed by immunohistochemical examination. TT-CPDs expression was divided into low (0-10%), moderate (11-25%), and high (>25%) expression in the nucleus. The assessment of p16^{Ink4a} expression is grouped into positive, negative expression in the nucleus of cells and cytoplasm. The collective data will be evaluated using chi-square.

Keywords: HPV, ocular surface squamous neoplasia, p16^{Ink4a}, TT-CPDs, UV exposure

CORRELATIOAN OF MLH1, MSH2, MSH6, AND PMS2 EXPRESSION AS MISMATCH REPAIR PROTEINS (MMR) WITH MICRO SATELLITE INSTABILITY (MSI) STATUS ASSOCIATED WITH AGE AND GENDER IN COLORECTAL CARCINOMA PATIENTS: RESEARCH PROPOSAL

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Background: The microsatellite instability (MSI) pathway is a genetic pathway underlying the occurrence of 15% of sporadic colorectal carcinoma and hereditary non-polyposis colorectal carcinoma. MSI is caused by deficiency in mismatch repair protein (dMMR). The MSI phenotype involves the loss of fuction of key proteins that normally repair DNA base pair mismatches, consist of MLH1, MSH2, MSH6, and PMS2. Several studies showed that cases of colorectal carcinoma occurs at the age above 40 years, with a majority in males. **Objective:** To determine and analyze the correlation of MMR proteins expression with MSI DNA (MLH1,MSH2, MSH6, PMS2) with MSI DNA status associated with age and gender of colorectal carcinoma patients. **Methods:** To find the correlation between MMR expression and MSI status, immunohistochemistry (IHC) examination was used to determine the expression of MLH1, MSH2, MSH6, and PMS2 proteins. Meanwhile, polymerase chain reaction (PCR) was used to examine the MSI status. Using a sample of 73 colorectal carcinoma patient cases, with clear patient data in the form of age and gender. This research method is analytic observation with a cross-sectional study design.

Keywords: colorectal cancer, immunohistochemistry, microsatellite instability, mismatch repair protein, polymerase chain reaction

HPV-ASSOCIATED ENDOCERVICAL ADENOCARCINOMA CERVIX, INVASIVE STRATIFIED MUCIN-PRODUCING TYPE

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Background: HPV-associated adenocarcinoma of the uterine cervix is a glandular tumour with stromal invasion and/ or exophytic expansile-type invasion, associated with high-risk HPV infection. It is about 5% of all cervical carcinomas. Mucinous type of adenocarcinoma is rare, it is about 10% of all endocervical adenocarcinoma and invasive stratified mucin-producting is one of four variants of mucinous adenocarcinoma. It is characterized by solid tumour nests of mucinous epithelial cells forming agregat and conspicious intracytoplasmic mucin ≥ 50%. **Case Description:** A 42 year old married woman, P3A0, complained of vaginal bleeding accompanied by foul odor. Internal examination revealed a mass measuring 3x2 centimeters, fragile and easily bleeds. Histopathological biopsy results were papillary adenocarcinoma. Surgical staging, pathological and immunohistochemical examination were performed. Microscopically the mass structures were villoglandular, agregates and solid surrounded by dense stromal with dense inflammatory cells. The cells formed were columnar-pseudostatified, polihedral with round nuclei, vesicular, coarse chromatin, conspicious- prominent nucleoli and intracytoplasmic mucin ≥ 50%. Expression of p16 and Cytokeratin 7 were positive, but expression of Estrogen Receptor and Cytokeratin 20 were negative. **Discussion and Conclusion:** Histopathological and immunohistochemical diagnosis according to an HPV-associated endocervical adenocarcinoma invasive stratified mucin-producing type, pattern C (diffusely destructive invasion).

Keywords: histopathology, immunohistochemistry, uterine cervix

THE BURDEN OF HUMAN PAPILLOMA VIRUS (HPV)-RELATED CERVICAL PRE-CANCER OF WOMEN INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS (HIV+) IN BALI, INDONESIA

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Background: An understanding of the burden of the causative agent for developing cervical cancer (CC), namely, infections with high-risk (HR)-HPVs, in HIV+ women in low-resourced countries is critical as improvements in antiretroviral therapy coverage results in longer survival leading to the development of HPV-related cervical precancer (CPC) and CC. **Objective:** To understand the burden of HPV and its relation to Pap based CPC lesion diagnoses and evaluate whether an education program could improve HPV and CC knowledge of HIV+ women in Bali, Indonesia where CC screening is hampered by this lack of knowledge. **Methods:** HPV genotype status and Pap diagnoses were assessed in 144 women. A questionnaire focused on HPV and CC was administered to 106 HIV+ women prior to administering an education program (pre-education) and after (post-education). **Results:** 90% of women diagnosed with abnormal Pap (≥ Atypical squamous cells of undetermined significance) were positive for any one of the 14 HR-HPV genotypes while 78% were positive for HPV genotypes included in the 9-valent HPV vaccine. 0-18% of women knew the correct answers to questions related to HPV and CC at pre-education while 95-100% knew the correct answers at post-education ($p < 0.001$). The desire to get screened and the importance of vaccination changed from 22% to 100% and 8% to 97%, respectively after the education program ($p < 0.001$). **Conclusion:** The high burden of HPV related CC risk in this population could be effectively reduced by an education program that addresses barriers for screening and HPV vaccine acceptability.

Keywords: cervical precancer, education, HPV, HIV+ women

CLINICOPATHOLOGICAL PROFILE OF COLORECTAL ADENOCARCINOMA: A STUDY AT DR M DJAMIL GENERAL HOSPITAL 2021-2022

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Background: Colorectal carcinoma stands as the third most prevalent cancer globally and ranks as the fourth leading cause of cancer-related mortality. The occurrence of colorectal carcinoma has been increasing and displays global variation. In this era, the responsibilities of anatomical pathologists extend beyond histopathological diagnoses to the evaluation of staging and prognostic indicators. **Objective:** This study aims to identify the age distribution, gender, tumor location, degree of differentiation, depth of invasion, LVI (*lymphovascular invasion*), and PNI (*perineural invasion*) in patients with colorectal adenocarcinoma at DR M Djamil General Hospital, Padang. **Methods:** This study employs a descriptive research design. Data were collected from medical records and histopathological examinations of 134 patients from July 2021 to June 2022 at DR M Djamil General Hospital, Padang. **Results and Discussion:** The study revealed that colorectal adenocarcinoma was most prevalent in the age group ≥ 50 years (71.6%) and more common in females (51.5%). Rectum is the most common tumor location (58.9%). Low-grade differentiation was observed in 85,1% of cases, and T3 invasion was present in 73,1% of cases. Lymphovascular invasion was negative in 71 cases (53%), and PNI was negative in 99 cases (73.9%). **Conclusion:** Colorectal adenocarcinoma predominantly affects individuals aged ≥ 50 years, with a mean age of 56.16. Female patients outnumbered male patients. Most tumors were located in the rectum. Low grade was the most frequent degree of differentiation. Subserosal layer invasion was a prevalent finding. Negativity of LVI and PNI were predominant in this study.

Keywords: colorectal adenocarcinoma, clinicopathological profile

CLINICOPATHOLOGICAL PROFILE OF COLITIS IN DR. HASAN SADIKIN GENERAL HOSPITAL BANDUNG PERIOD 2022

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Background: Colitis is an inflammation of the colon that occurs acutely or chronically. Colitis can be caused by infection,ischemia,medication, or idiopathic conditions. According to *Odze & Goldbum* classification, colitis is categorized into inflammatory bowel disease(*IBD*) and *non-IBD*. Diagnosis of colitis requires colonoscopy and histopathology examination. This study is important to provide initial data that can contribute to improving the accuracy of diagnosis and management of colitis patients. **Objective:** To determine the clinicopathological profile of colitis cases at Dr.Hasan Sadikin Hospital in 2022. **Methods:** A retrospective descriptive study was conducted on colitis patients in 2022. Data collected from medical records were analyzed to determine the profile of demographic status, clinical manifestations, disease history, colonoscopy results, and histopathological findings. **Results and Discussion:** A total of 145 colitis cases, 79%(54,5%) patients were male, and 66(45,5%) were female with an age range of 6-75 years. The most common chief complaints were chronic diarrhea 71%(103), followed by hematochezia 16%(23) and abdominal pain 13%(19). Colitis cases with history of carcinoma and followed by chemotherapy or radiation were 6,2%(9). Cases with history of disease that can induce colitis were 6,2%(9), consisted of tuberculosis infection, systemic lupus erythematosus, and human immunodeficiency virus infection. Colonoscopy examinations revealed ulcerations, edema, and erythema in the colonic mucosa. Histopathological findings with non-*IBD* colitis were 77,2%(112) and *IBD*-colitis were 22,8%(33). **Conclusion:** The majority of colitis patients were males with an average age of 43 years. The most common clinical manifestation was chronic diarrhea and the most common histopathological feature was non-*IBD* colitis (non-specific chronic colitis).

Keywords: colitis, histopathology, inflammatory bowel disease

CLINICOPATHOLOGICAL CHARACTERISTICS AND RISK STRATIFICATION OF GASTROINTESTINAL STROMAL TUMOR IN Dr. HASAN SADIKIN GENERAL HOSPITAL BANDUNG 2017-2023

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Background: Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors of gastrointestinal tract. Armed Forces Institute of Pathology (AFIP) published consensus approach to risk stratification. This risk stratification is used for treatment of GIST in European Society for Medical Oncology (ESMO) guidelines and prognostic parameter. **Objective:** To describe clinicopathological characteristics and evaluated risk stratification of GISTs in Hasan Sadikin Hospital from January 2017 to July 2023. **Methods:** GIST data from 2017 to 2023 were reviewed. Statistical analysis of age, gender, location, clinical symptoms, preoperative examination, immunohistochemistry, metastasis and risk stratification evaluated according to AFIP. **Results and Discussion:** Total 38 case collected. Age range from 30 to 69, and average 50, consist of (63%; n=24) woman and (37%; n=14) man. Most common location are gaster (51%; n=19) and most complained of patients are abdominal pain. Computed Tomography (CT) abdominal scan performed (92%; n=35) as preoperative examination. All cases positive for DOG-1. (8%; n=3) of cases had metastases in lymph nodes and liver. Risk stratification has been evaluated and the results are (68%; n=24) high risk, (23%; n=8) moderate risk, and (9%; n=3) very low risk. The most common category was 6b (34.3%; n=12), with non-gastric primary tumors dominant. **Conclusion:** GIST has variable clinical appearance. Diagnosis of GIST was concluded based on positive DOG-1 immunohistochemistry. All cases with metastases show high risk in category 6b. High risk stratification more often diagnosed in non gaster primary tumor.

Keywords: clinicopathology, gastrointestinal stromal tumor, risk stratification

MECKEL'S DIVERTICULUM-INDUCED INTUSSUSCEPTION COINCIDING WITH DIABETES MELLITUS IN A YOUNG ADULT MALE: A CASE REPORT

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Background: Adult intussusception, particularly when Meckel's Diverticulum induces it, is uncommon. Non-specific symptoms such as abdominal pain and nausea complicate diagnosis. Coexisting conditions like diabetes mellitus require specialized attention. **Case Description:** A 27-year-old diabetic male with severe right-sided abdominal pain, nausea, and decreased appetite were examined. Initial treatments did not improve his condition. Further investigations, including CT scans, identified an ileo-ileal intussusception instigated by Meckel's Diverticulum and partial high obstruction ileus. Surgical intervention was necessitated. Microscopic examination revealed transmural inflammation, necrosis, hemorrhage, and edema. Also heterotopic gastric tissue is found within the diverticular structure as presentation of Meckel's diverticulum. **Discussion and Conclusion:** Ileo-ileal resection and adhesiolysis were performed successfully. Postoperative care focused on monitoring for complications, pain management, maintaining drain patency, and meticulous glucose level monitoring due to the patient's diabetes. The patient's significant postoperative improvement highlights the importance of prompt diagnosis and surgical intervention in managing Meckel's Diverticulum-induced intussusception. The case emphasizes the need for tailored postoperative care, considering the patient's comorbidities, such as diabetes mellitus. This case is a reminder of the potential role of Meckel's Diverticulum in adult intussusception cases.

Keywords: adult intussusception, diabetes mellitus, high obstruction ileus, intussusception, ileo-ileal intussusception, meckel's diverticulum.

A CONFUSING CASE OF HEPATIC MELANOMA - IS IT PRIMARY OR METASTATIC?

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Background: Primary hepatic melanoma is exceedingly rare. This is a case report of a melanoma lesion in the liver without an unknown primary tumor, whereas a possibility of primary hepatic melanoma can't be excluded. **Case Description:** A 41 year old man had a lump in the right upper abdomen for 3 months. There were no complaints or history of tumors elsewhere. He had high ALP and LDH, normal AFP, negative HBsAg and anti-HCV. The abdominal MSCT scan and MRI showed a multinodular mass in the liver, suggesting a hepatocellular carcinoma. Microscopically, there was proliferation of epithelioid cells composed of organoids, solid, pseudoglandular, accompanied by black to brown pigment among the hepatocytes, with the background of steatosis and cirrhosis. Tumor cells are round to oval nuclei, marked pleomorphic, hyperchromatic, vesicular with conspicuous nuclei, clear cytoplasm. Immunohistochemistry showed strong positive Vimentin, S100 and HMB45, negative Heppar1, weakly positive EMA and CK7 at certain foci. The final diagnosis was a malignant melanoma of the liver. The patient was lost from follow-up so any occult primary tumor couldn't be detected. **Discussion and Conclusion:** Based on the clinical data and radiology examination, the differential diagnosis were hepatocellular carcinoma and cholangiocarcinoma. Meanwhile the morphological features of histopathology lead to differential diagnosis of hepatocellular carcinoma, cholangiocarcinoma, epithelioid GIST, epithelioid angiomyolipoma and malignant melanoma. The immunohistochemistry confirmed the diagnosis of hepatic malignant melanoma. PET scan should be done to confirm whether this case is a primary hepatic melanoma or a metastatic lesion.

Keywords: hepatic melanoma, liver melanoma, melanoma malignant, primary hepatic melanoma

A RARE CASE OF ECTOPIC PANCREAS IN MECKEL'S DIVERTICULUM, COMPLICATED WITH XANTHOGRANULOMATOUS INFLAMMATION

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Background: Ectopic pancreas, which can be found in Meckel's diverticulum, can cause severe complications that are sometimes not diiagnosed because of their rarity. **Case Description:** A 43-year-old male who had hernia repair surgery had been admitted to the hospital with suspicion of suture material from surgery before. The blood test revealed leukocytosis. An abdominal abscess was suspected by MSCT tests. He had a re-surgery. Histopathological examination of a specimen labeled with Meckel's Diverticulum, 4x3x3 cm in size, with some whitish areas, revealed pancreatic tissue located in the mucosal to subserosal layers. The larger specimens, 12x9x5 cm in size, revealed fibrotic tissue and mature fat with xanthogranulomatous inflammation. **Discussion and Conclusion:** An ectopic pancreas can be inflamed or undergo malignant transformation. A retrospective study about ectopic pancreas revealed that this case can be found in Meckel's diverticulum and mostly has the symptoms of abdominal pain, gastrointestinal bleeding, and anemia. Another case presentation of ectopic pancreas, located submucosal to the serosal surface of the jejenum, had the same histopathological features as our case that were consistent with ectopic pancreatitis. MSCT tests showed lesions that had some enhancements similar to those in pancreatic tissue. However, this finding is not specific and could be described as a mesenteric mass or abscess. It can be concluded that ectopic pancreas should be the differential diagnosis in mesenteric masses or intraabdominal abscess. Histopathological examination can reveal cases of ectopic pancreas.

Keywords: ectopic pancreas, Meckel's diverticulum, xanthogranulomatous inflammation

GIANT MESENTERIC LYMPHANGIOMA: A CASE REPORT

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Background: Mesenteric lymphangiomas are rare benign lesions of vascular origin that show lymphatic differentiation, accounting for < 1% of all lymphangiomas. **Case Description:** A 11-year-old girl came with major complaints of abdominal enlargement with progressive abdominal pain for 1 month. On physical examination, there was a mass was palpable in the abdomen with a size of about 10 cm in diameter, palpable solid and immobile. Abdominal ultrasonography examination revealed jejunum intestinal ligament with complex, multilocular, partially septated cystic mass, suspicious for ovarian cyst. An exploratory laparatomy was performed, and a solid multicystic mass with a diameter of 1-12 cm containing milky white fluid partially solid was observed. Microscopic features showed proliferation of lymph vessels with varying size and thickness. The cyst wall was lined by a single simple layer of lymphatic endothelial cells, which are usually attenuated without cytological atypia. Some dilated spaces are partially invested by a layer of smooth muscle and/or underlying fibromuscular lymphatic vessel walls. The lymphatic spaces contain clear fluid or prominent foamy histiocytes. The clinical, imaging and histopathologic features suggest lymphangioma. **Discussion and Conclusion:** Mesenteric lymphangioma is a benign cystic tumor of lymphatic vessels. Some cases of mesenteric lymphangioma have a tendency to induce marked reactive and inflammatory changes in the surrounding tissue, and the large size may lead to the clinical impression of a malignant tumor. Appropriate clinical correlation, imaging and pathology examination are required in the diagnosis for proper early treatment. Immunohistochemisty staining CD31 and D-40 positive, and variable positive of CD34 can help to confirm the diagnosis.

Keywords: lymphangioma, lymphatic tumor, mesenteric cyst

COEXISTENCE OF GALLBLADDER ADENOCARCINOMA AND LEIOMYOSARCOMA

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Background: Multiple cancers coexisting together in the gallbladder are extremely rare. To the best of our knowledge, no case report of a gallbladder adenocarcinoma coexisting with a leiomyosarcoma has been reported up to this time. **Case Description:** A 62-year-old man came with jaundice and severe abdominal pain. From ultrasonography, the initial diagnosis was obstructive jaundice due to cholecystolithiasis but a CT scan examination revealed a cystic and solid inhomogeneous mass around the pancreatic head that extended to the common bile duct and cystic duct. Ca 19-9 markedly increased but not with AFP and CEA. Explorative laparotomy discovered a dilated, stiff gallbladder with a tumor and massive adhesions which made it difficult to identify other organs and unresectable. Macroscopic examination revealed spongy white gallbladder tissue fragments with multinodular masses protruding into the lumen. Histopathologic findings revealed an adenocarcinoma focus that invaded into the tunica muscularis. A separate location, a leiomyosarcoma focus was notified in the form of a fascicle structure consisting of spindle cells. The immunohistochemical staining showed positivity for AE 1/3, CK7, Ki67 (adenocarcinoma), Caldesmon, and SMA (leiomyosarcoma). **Discussion and Conclusion:** Simultaneous presence of 2 neoplasms in the gallbladder could be due to local spread, metastasis, or lesions of different origins that coincidentally appear together. Cases of double neoplasms in the gallbladder are very rare but this diagnosis needs to be considered cautiously, especially in cases of obstructive jaundice in elderly patients. A multidisciplinary approach is very helpful for the best management approach.

Keywords: adenocarcinoma, leiomyosarcoma, coexistence, gallbladder

PRIMARY LIVER ACTINOMYCOSIS MASQUERADING AS LIVER CANCER: A CASE REPORT

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Background: Liver actinomycosis is a chronic granulomatous infectious disease caused by *Actinomyces* sp. The incidence of primary infection in the liver is only accountable 5% of all actinomycosis cases. Preoperative and intraoperative diagnosis is difficult because clinical and radiologic features resemble neoplasms. Histopathological examination could differentiate between neoplasm and actinomycosis. **Case Description:** A diabetic 44-year-old woman came to Dr. Soetomo Hospital Surabaya with complaints of a lump in the right upper abdomen. On physical examination, a solid and tender mass was palpated in right hypochondrium region measuring 6x5x2 cm, with ill defined border and bluish overlying skin. The results of physical and radiological examinations led to the diagnosis of cholangiocarcinoma. Histopathologic finding with HE staining of hepatic biopsy tissue showed basophilic agregate surrounded by Splendore-Hoeppli material accompanied by suppurative granulomatous inflammation. Grocott Methenamine Silver (GMS) staining displayed granules containing filament, therefore the diagnosis of actinomycosis was established. Then intravenous ceftriaxone antibiotic therapy followed by cefixime per oral and insulin were administered. The patient was re-controlled after 1 month and abdominal CT-Scan showed decreased size of the mass. **Discussion and Conclusion:** *Actinomyces* sp. is a normal flora in humans that can turn pathogenic in immunocompromised patients. Abdominal wall thickening, invasion into surrounding tissues and abscess formation could mislead it as malignancy. Appropiate diagnosis is the key to the management of hepatic actinomycosis. Drainage of abscesses and long-term antibiotics can provide a good prognosis.

Keywords: *Actinomyces* sp., granulomatous chronic inflammation, liver actinomycosis, Splendore-Hoeppli material

GASTROINTESTINAL BASIDIOBOLOMYCOSIS: A RARE CASE AND MASQUERADING COLONIC CANCER

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Background: Gastrointestinal Basidiobolomycosis (GIB) is a fungal infection that occurs in the digestive tract and liver caused by *Basidiobolus ranarum*. Basidiobolomycosis is a very rare infection. The first case in Indonesia was reported as subcutaneous infection in1956. Here is a case report of GIB based on clinical and histopathological findings. **Case Description:** A-55 years old male complained right abdominal lump and constipation for the past 8 months. Colonoscopy showed tumor accompanied by intussusception in caecum. Hemicolectomy dextra was performed and displayed a 5 cm poorly circumscribed mass, penetrating serosal surface and omentum. Microscopic finding showed suppurative granulomatous inflammation, accompanied by thin walled hyphae, surrounded by eosinophilic amorphous material known as the Splendore-Hoeppli phenomenon. Spherical oval microorganisms were found. GMS staining showed black colored hyphae, consistent with Basidiobolus. **Discussion and Conclusion:** Gastrointestinal basidiobolomycosis has a nonspecific clinical and radiological features that often resembles malignancy, therefore difficult to diagnose. Immunocompromised state is a risk factor for GIB, such as Diabetes mellitus that patient had. Accurate diagnosis and appropriate management will provide good prognosis. Histopathological examination can help establish the diagnosis, if microbiological examination cannot be done.

Keywords: *Basidiobolus ranarum*, gastrointestinal basidiobolomycosis, Splendore-hoeppli phenomenon

SOLID PSEUDOPAPILLARY NEOPLASM OF THE PANCREAS WITH TYPICAL HISTOPATHOLOGY: A RARE CASE

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Background: Solid pseudopapillary neoplasms are rare low grade malignant pancreatic tumors. The incidence rate is 0.9 - 2.7% of all cases of exocrine pancreatic tumors, often in young women, the common location is the tail of the pancreas. This neoplasm has typical histopathologic features, good prognosis and long-term survival in patients. **Case Description:** A 15 years old female adolescent with complaints of a mass in the right upper abdomen with pain since 5 years before being referred to Dr. M. Djamil Hospital Padang. The mass increased in size and pain in the last 1 year. Computed tomography scan with contrast impressed an intra-abdominal mass suggestive of a pancreatic caput cyst. Resection laparotomy was performed and the pancreatic caput cyst mass was removed. Macroscopic examination revealed well demarcated mass measuring 18x13x8 cm. A solid, friable, blackish-brown mass with cystic portion at the cut surface. Histopathologic examination showed "poorly cohesive" monomorphic cells, round to oval nuclei, well defined chromatin, groove nuclei, eosinophilic cytoplasm that forming solid structures, pseudopapillary with hyalinized stroma, cholesterol crystals, and foamy histiocytes. Imunohistochemical smear of chromogranin was negative, synaptophysin was weakly positive in cytoplasm. **Discussion and Conclusion:** Solid pseudopapillary neoplasms have unknown cell differentiation origin. Macroscopic, histopathology support by immunohistochemical smear can diagnosis solid pseudopapillary neoplasms of the pancreas be established. Carefull examination in macroscopic and histopathology of the specimen to avoid misdiagnosis with neuro endocrine tumors that similar to this neoplasm. solid pseudopapillary neoplasm of the pancreas, poorly cohesive, histopathology.

Keywords: histology, poorly cohesive, solid pseudopapillary neoplasm of the pancreas

APPENDICEAL DIFFUSE LARGE B-CELL LYMPHOMA PRESENTING AS ACUTE APPENDICITIS: A CASE REPORT

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Background: Appendiceal Diffuse Large B-Cell Lymphoma (DLBCL) is uncommon in gastrointestinal malignancies, constitutes 1.7 % of all appendiceal tumor. **Case Description:** A 54-year-old man was presented with abdominal pain, dull, persistent, and progressively worsening on right lower quadrant. Initial assessment in emergency department was appendicitis. An appendectomy was performed, resection specimen revealed enlarged appendix, 6x3.5x2.5 cm in size. Microscopically the tumor cells show diffuse pattern, consist of large-sized atypical lymphoid cells suggestive to Non-Hodgkin Lymphoma. Strong positive CD45, CD20 and BCL2 was expressed in the tumor cells, with high proliferation index. CD3, CD30, and CD10 staining was negative. The diagnosis Appendiceal DLBCL was made. Currently, the patient has undergone 4 series of RCHOP chemotherapy postoperatively with a good general condition, and the abdominal MSCT evaluation did not find suspicious lymphadenopathy in other locations. **Discussion and Conclusion:** Appendiceal DLBCL is uncommon malignancy in the GI track, nevertheless it accounts for 40% of appendiceal lymphomas. It occurs predominantly in middle-age patients and have a tendency to localize the tumor in its anatomical site, which prognostically more favourable than nodal DLBCL. Multi-modality approach including clinical feature, surgery, histopathology, immunophenotype, and chemoteraphy should be taken for better survival outcome.

Keywords: acute appendicitis, appendiceal lymphoma, DLBCL, gastrointestinal lymphoma, lymphoma

COMBINED HEPATOCELLULAR-CHOLANGIOCARCINOMA: DIAGNOSIS CHALLENGE OF A RARE CASE

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Background: Combined hepatocellular-cholangiocarcinoma (cHCC-CC) is a rare and aggressive type of primary liver cancer with clinicopathologic features of both hepatocellular carcinoma (HCC) and cholangiocarcinoma (CC). The prevalence is less than 1% of hepatic carcinoma, with more aggressive behavior and poorer prognosis. cHCC-CC is characterized by the presence of both HCC and CC morphology, leading to difficulties in accurate classification. **Case Description:** A 56-year-old man, complained of right upper quadrant abdominal pain and jaundice for 1 month. Magnetic Resonance Cholangiopancreatography (MRCP) revealed cholangiocarcinoma of the confluence duct to bilateral intrahepatic bile ducts. Tumor markers showed normal AFP with elevated CA19-9 levels. Therefore, cholangiocarcinoma with differentials of intrahepatic cholangiocarcinoma was suspected. Biopsy of liver and common bile duct was performed. Histomorphology exhibit trabecular to papillary pattern, partially solid, with moderate pleomorphism. Immunohistochemical staining with HepPar1 and CK7-CK19 highlighted different morphologic components in hepatocellular and cholangiocytic differentiation, respectively. **Discussion and Conclusion:** cHCC-CC is a rare primary liver carcinoma so its clinical manifestations are still debatable. The clinical symptoms resemble those of HCC and CC. Serologic markers such as AFP and CA 19-9 are related to HCC and CC, despite being non-specific, with low sensitivity for cHCC-CC. The dominant histopathologic components in cHCC-CC greatly influences the imaging conclusions, as many as half of cHCC-CC may be incorrectly categorized either exclusively as HCC or CC. Therefore, histomorphology plays an essential role in definitive diagnosis of cHCC-CC.

Keywords: combined hepatocellular-cholangiocarcinoma, cholangiocarcinoma, hepatocellular carcinoma, primary liver carcinoma

PEUTZ–JEGHERS SYNDROME IN YOUNG FEMALE WITH HISTORY OF INTUSSUSCEPTION: A CASE REPORT

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Background: Peutz–Jeghers Syndrome (PJS) is a rare case with prevalence of 1/280,000 individuals. PJS is characterized by gastrointestinal hamartomatous polyps and mucocutaneous hyperpigmentation. Most PJS patients were admitted to hospital because of severe anemia, intussusception and gastrointestinal obstruction and were treated by emergency surgery. PJS patients must be followed up due to the increased risk for development of gastrointestinal and nonintestinal cancer. Family screening is also necessary for early detection and prevent complications. **Case Description:** We describe PJS in a 22 years-old female. Initially, she was diagnosed dyspepsia. When she was 9 years old, she underwent emergency laparotomy due to intussusception. The histopathological examination revealed multipolyposis peutz jeghers. Then she underwent endoscopy and found hundreds of polyps which were located in the gastric mucosa and then extended to the duodenum, ileum and colon. She also has pigmentation of the lips and oral mucosa since childhood. Her mother had history of multiple gastric polyps and grandmother died because colon malignancy. Family screening already performed. Currently she has no complaints and undergo routine polypectomy at RSCM/ 2 years. **Discussion and Conclusion:** PJS is caused by mutation in STK11/LKB1 gene and follows an autosomal dominant inheritance. Gastrointestinal complaints are not specific until complications occured and surgery is required. Another pathognomonic sign are the presence of mucocutaneous hyperpigmentation and family history, can direct the diagnosis. Polypectomy is recommended to prevent complications. Patients should be followed up routinely because of the risk of malignant transformation.

Keywords: hamartoma polyps, intussusception, Peutz–Jeghers syndrome, polypectomy

COMBINED HEPATOCELLULAR-CHOLANGIOCARCINOMA: A CASE REPORT OF RARE AGGRESSIVE PRIMARY LIVER CARCINOMA

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Background: Combined hepatocellular-cholangiocarcinoma (cHCC-CCA) is a rare and aggressive primary liver cancer (PLC). It is defined by hepatocytic differentiation of hepatocellular carcinoma (HCC) and cholangiocytic differentiation of cholangiocarcinoma (CCA) in the same tumor. It is a diagnostic challenge for pathologists due to its morphological and phenotypic diversity. Accurate diagnosis of cHCC-CCA is essential for patient management and prognosis. **Case Description:** A 73-year-old woman presented with a complaint of an abdominal lump that had been increasing in size for two years. Complaints were accompanied by mild and relapsing pain. Physical examination revealed anemic conjunctiva, anicteric, and palpably enlarged liver. The abdominal ultrasound and contrast CT scan imaging results suspected an HCC and confirmed no mass at other sites. Haematoxylin-eosin staining of the percutaneous core biopsy showed adenocarcinoma, which could be hepatocytic, cholangiocytic, or metastatic. These results were confirmed by immunohistochemistry staining of HepPar1+, CK7+, CK20+ and diagnosed as cHCC-CCA. **Discussion and Conclusion:** In this case, a typical HCC component was found as a hepatocyte differentiated with polygonal tumor cells, confirmed by HepPar1+ immunohistochemistry staining. Then, an adenocarcinoma component also showed CK7+, CK20+, and HepPar1 – in immunohistochemistry staining. Therefore, it was concluded that this case was a combined hepatocellular-cholangiocarcinoma.

Keywordss: cholangiocarcinoma, combined hepatocellular-cholangiocarcinoma, hepatocellular carcinoma, immunohistochemistry

EXTRAGONADAL PRIMARY TERATOMA OF THE ANORECTAL: A CASE REPORT

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Background: Teratoma is an embryonic neoplasm that contains tissue originating from each of the 3 germ layers. It is generally found in the gonadal-sacrococcygeal area, sometimes midline areas (mediastinum, retroperitoneum, head and neck region). Primary extraragonadal teratoma is extremely rare and not many cases have been published. This neoplasm is thought to originate from pluripotent stem cells which are abnormal embryonic remains in the anorectum. **Case Description:** A 72-year-old woman complaining difficulty of defecating since the last 2 days. She has history of lump in the anus which had been getting bigger since last year. Physical examination and anuscopy showed skin-coated polypoid mass, measuring 12x9x6 cm in the anorectal region. The mass was then completely excised. It has smooth yellow, firm appearance and a few white areas, with soft oily and hard areas. Histologically, the tumor contains three mature embryonal components including ectodermal (epidermis, skin adnexa, brain tissue), mesodermal (muscle, blood vessels, fat and osteoid matrix), endodermal (thyroid glands, gastrointestinal and respiratory epithelium), confirming of mature teratoma. **Discussion and Conclusion:** Teratomas should be considered in the differential diagnosis when clinically suggestive of an anorectal polypoid lesion. Histopathological confirmation is necessary to diagnose teratomas. Anorectal primary mature teratoma must be differentiated from other neoplastic polyps as well as the possibility of local spread of teratoma arising in adjacent organs. Mature teratomas are generally benign but can undergo malignant transformation. Therefore, complete excision is highly recommended to avoid the risk of malignancy.

Keywords: anorectal, extragonadal, mature teratoma, primary

YOUNG ONSET OF INTRADUCTAL PAPILLARY MUCINOUS NEOPLASM (IPMN) PRESENTING AS ILEUS

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Background: Intraductal papillary mucinous neoplasm (IPMN) is a mucin-producing epithelial tumor that shows papillary architecture with dilatation of the ducts. However, IPMN is often misdiagnosed with other cystic lesions due to similar clinical and radiological findings. Earlier recognition allows for prompt resection before malignant transformation. Here, we report a case of IPMN associated with invasive carcinoma showing atypical clinical symptoms. **Case Description:** A 44-year-old man was referred with constipation leading to ileus, a painless epigastric mass, accompanied by weight loss of approximately 25kg in the last 6 months. Emergency ostomy was performed. Subsequent abdominal CT-Scan revealed a cystic lesion of the pancreatic head without main duct dilatation, with narrowed common bile duct (CBD). Serum CA19-9 was increased. Biopsy was performed from the pancreatic head and CBD. Histopathology showed IPMN with gastric and intestinal type, associated with invasive carcinoma. **Discussion and Conclusion:** IPMN in this patient occurred early compared to the mean age across regions (62-67 years). Histomorphology of IPMN comprises four cytoarchitectures: gastric, intestinal, oncocytic, and pancreatobiliary subtypes. Of note, IPMN associated with invasive carcinoma exhibit worse prognosis. This case presents unusual clinical manifestation of IPMN as ileus. Surgical resection is the best choice to remove all high-risk and malignant ductal epithelium and minimize the probability of its recurrence, combined with chemotherapy.

Keywords: IPMN, malignant, invasive

A RARE CASE UNVEILED: PEDIATRIC HEPATOCELLULAR CARCINOMA DIAGNOSED VIA RAPID ON SITE EVALUATION

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Background: Hepatocellular carcinoma (HCC) is a primary liver malignancy, accounting for over 90% of primary liver cancers and typically affecting individuals between the ages of 30 and 60. In contrast, hepatoblastoma is the most common liver cancer in children aged 5 months to 6 years. While histopathology remains the diagnostic gold standard, it is often impractical due to its invasive nature and patient conditions. Fine Needle Aspiration Biopsy (FNAB) offers a minimally invasive alternative, although cell adequacy for further tests like immunostaining remains a challenge. Rapid On-Site Evaluation (ROSE) addresses this issue by ensuring adequate cell collection during FNAB. **Case Description:** A 5-year-old girl presented with seizures and a month-long history of abdominal enlargement, but no fever, nausea, or vomiting. Abdominal MSCT revealed a large liver mass affecting seven segments and compressing the right kidney. Blood tests indicated leukocytosis and elevated AST, ALT, and AFP levels. Due to her clinical condition, a core biopsy was contraindicated. An ultrasound-guided FNAB was performed, and ROSE confirmed the presence of tumor cells in a trabecular and pseudoglandular pattern, consistent with HCC. **Discussion and Conclusion:** HCC is generally rare in children, especially those as young as 5 years old, making this case highly unusual. ROSE serves as a valuable diagnostic tool for inoperable or complex cases, enhancing the diagnostic accuracy by ensuring adequate cell collection. This case underscores the utility of ROSE in the diagnosis of HCC in pediatric patients where traditional methods are impractical.

Keywords: FNAB, hepatocellular carcinoma, pediatric, ROSE

TRIPLE METACHRONOUS PRIMARY CANCERS OF THE BREAST, RECTUM, AND SKIN: A CASE REPORT

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Background: Multiple primary cancer (MPC) is multiple tumors with synchronous or metachronous occurrence in the same individual. Metachronous tumors are defined as those that occur more than 6 months after the first diagnosed tumor. We report a case with triple metachronous primary breast, rectum, and skin cancers. This combination has never been previously reported in the English literature. **Case Description:** A 58-year-old woman presented with a lump in right breast in three months. There were lumps in the right axilla in 1 month. Histopathology found an invasive micropapillary carcinoma with many lymph node metastases. Two years later, the patient presented defecation disorders and got rectal mass biopsy with an adenocarcinoma histopathological diagnosis. Then in one month, the patient got skin mass biopsy on a nodule at the right toe and the histopathological result revealed squamous cell carcinoma with moderate to poorly differentiated. **Discussion and Conclusion:** Multiple primary cancer (MPC) incidence is estimated at 0.52% to 11.7%. A triple metachronous primary cancer of the breast, rectum, and skin case is very rare. We revealed primary cancer with different histopathology from the breast, rectum, and skin. The causes of MPCs are not yet clear, but they may be related to various factors. Interdisciplinary collaboration can guarantee the best possible treatment for the patient. In conclusion, the case strongly contributes to the progress of medical knowledge, generating new hypotheses, and acting as a stimulus for the scientific community to verify them.

Keywords: breast, rectum, skin, triple metachronous cancer

CLINICOPATHOLOGICAL CHARACTERISTICS OF LANGERHANS CELL HISTIOCYTOSIS IN HASAN SADIKIN GENERAL HOSPITAL BANDUNG FROM 2010-2023

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Background: Langerhans cell histiocytosis (LCH) is the most common histiocytic disorder in children. The clinical manifestation is highly heterogenous, ranging from single organ to multiple organs. The most severe clinical form of the disease tends to affect young children (aged <2 years) and typically involves risk organs (RO), which are liver, spleen, and hematopoietic system). **Objective:** The aim of this study is to describe clinical and pathological characteristics of Langerhans cell histiocytosis in Hasan Sadikin General Hospital, Bandung, from 2010-2023. **Methods:** Medical records of all children diagnosed with LCH between January 2010 and July 2023 from Hasan Sadikin General Hospital were reviewed and collected. The review included the clinical examination, radiological examination, and anatomical pathology examination. The characteristics includes sex, age at diagnosis, anatomical pathology diagnostic modality, and clinical classification. The clinical classification divided to single system (SS) and multiple system (MS). MS was categorised as RO involvement and non-RO involvement. **Results and Discussion:** A total of 43 cases were collected, consisted of 28 males (65.12%) and 15 females (23.26%). Patients <3 years old had highest prevalence (33 cases; 76.74%). The most common diagnostic modalities were tissue biopsy followed by immunohistochemistry (21 cases; 48.84%). There were 15 SS cases (35%) and 28 cases MS (65%). The most SS cases had skin and lymph node involvement (similarly 7 cases; 46,67%) and the most MS with RO involvement were in liver (14 cases; 50%). **Conclusion:** Majority of the cases are <3 years old, with most of them had MS with liver involvement.

Keywords: langerhans cell histiocytosis, multiple system, single system.

IDIOPATHIC MULTICENTRIC CASTLEMAN DISEASE RELATED TO AUTOIMUM CONDITIONS IN CHILDREN AGED 12 YEARS OLD

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Background: Idiopathic Multicentric Castleman Disease (IMCD) is a subtype of Castleman Disease (CD). IMCD is a rare, challenging, and life-threatening case of the sufferer. The etiology of IMCD is not yet known with certainty. The clinical condition of IMCD also often overlaps with autoimmune or autoinflammatory disorders. Therefore, this report aims to correctly identify and discuss cases suffered by pediatric patients in Surabaya, to avoid misdiagnosis and provide appropriate treatment as soon as possible. **Case Description:** A case report of Castleman Disease suffered by a 12-year-old girl was handled by Surabaya Jemursari Islamic Hospital. The pediatric patient complained of a lump in the left armpit accompanied by fever, shortness of breath, watery eyes, and blurred vision. The diagnosis was successfully established by histopathological examination of the anatomy of the operating specimen with the suggestion of serological examination and IL-6. **Discussion and Conclusion:** The pathogenesis of IMCD often involves hypercytokinemia, including IL-6 which causes symptoms of systemic inflammation and generalized lymphadenopathy. IMCD is often associated with autoimmune manifestations that may precede a diagnosis of iMCD or may be identified at the same time, or even after a diagnosis of IMCD. Thus, definitive diagnostics of Castleman Disease need to be established clinically, and anatomical histopathology examination to provide appropriate management to patients because this case is rare, challenging, and life-threatening. Several treatment modalities have also been introduced in the literature such as surgery, chemotherapy with or without steroids, and stem cell transplantation.

Keywords: autoimmune, castleman, children, idiopathic

GELATINOUS TRANSFORMATION OF BONE MARROW OBSCURING DIAGNOSIS OF ACUTE MYELOID LEUKEMIA: A CASE REPORT

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Background: Gelatinous bone marrow transformation (GMT) is when fat cells and hematopoietic cells are lost from the bone marrow with replacement by an increased amount of amorphous material. GMT may be caused by malnutrition, chronic infection, and malignancy such as leukemia. Since GMT is not a disease but more of a sign of other debilitating diseases, we need to look for the primary cause so it won't go underdiagnosed. **Case Description:** We described a case of GMT in a thirty-three-year-old male with fatigue and occasional fever. His blood tests showed pancytopenia. He has no reactivity against human immunodeficiency virus and hepatitis B. Bone marrow biopsy shows gelatinous bone marrow transformation with megakaryocyte dysplasia. Immunophenotyping shows a myeloid lineage proliferation indicating acute myeloid leukemia (AML). Radiologic findings were pleural effusion on the left lung suggestive of pneumonia. **Discussion and Conclusion:** The diagnosis of AML, in this case, was obscured by the gelatinous transformation of bone marrow. The 20% blast count was unmet because the bone marrow was hypocellular. To find the AML, flow cytometry was done. The result was that some blast cells showed monocytic lineage. Another factor that may contribute to GMT is pneumonia. We concluded that GMT was a sign that there were other chronic conditions like neoplasm such as AML, that may exist behind it and may cause GMT in the first place.

Keywords: acute myeloid leukemia, gelatinous bone marrow transformation, obscuring

T-CELL LYMPHOMA AFTER SILICONE INJECTION IN THE EYELID: A RARE CASE

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Background: Lymphoma in the eye can affect the eyeball, orbit, tear glands and eyelids. The involvement of lymphoma in the eyelids is about 5-20%, usually in the form of non-Hodgkin's lymphoma of 80% B lymphocytes, 14% T lymphocytes and 6% NK cells. Generally, these lymphomas are unilateral and only 20% of cases are bilateral. In Indonesia, there are no reports of T-cell lymphoma of the eyelids. **Case Description:** In this case A 50-year-old woman with complaints of lumps on the left and right upper eyelids that have been getting bigger and bigger since 1 year ago. Initially a lump on the left eyelid followed by a lump on the right eyelid. The patient with a history of using silicon several years ago, initially suspected of having silicoma, then underwent surgery in 2018 with reactive hyperplasia results, then in 2019 the operation was carried out again with the results of low grade non-Hodgkin malignant lymphoma, then continued with immunohistochemical examination with the results of T cell lymphoma eyelid region. **Discussion and Conclusion:** The difficult to make an exact diagnosis of T cell lymphoma in the eyelids because it sometimes resembles an inflammation so that it requires histopathological and immunohistochemical examination, so that the therapy given will be more appropriate. Histopathological examination is sometimes difficult to distinguish between reactive hyperlpasia and malignant lymphoma. This is because the picture is not typical so that further examination with immunohistochemistry is needed for diagnosis using CD 20, CD 3 and ki67.

Keywords: eyelid, Non Hodgkin Lymphoma, T cell lymphoma

A CASE REPORT: BREAST PLASMACYTOMA ASSOCIATED WITH AMYLOIDOSIS: PROBLEM IN DIAGNOSIS

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Background: Breast plasmacytoma (BP) associated with amyloidosis is a rare case. Initial diagnosis of this case can be problematic because it resembles common breast lesions including adenocarcinoma. We reported a case of BP associated with amyloidosis initially diagnosed as plasmacytoma with a differential diagnosis of lobular carcinoma. **Case Description:** A 49-year-old woman, presented with a solid mass in her right breast. Ultrasonography showed a simple cyst, 8 mm in diameter. Initial diagnosis was concluded from lumpectomy with the differentials of plasmacytoma and lobular carcinoma. Histopathology of the following radical mastectomy with axillary dissection found no tumor in breast tissue and all 13 lymph nodes. **Discussion and Conclusion:** The diagnosis of BP associated with amyloidosis was established from positive CD138 expression in immunohistochemistry, and also supported by Kappa and Lambda immunofluorescence. Histochemistry with Congo red confirmed the presence of amyloid. The diagnosis of BP is established by the presence of extraosseous plasma cell tumors in the absence of multiple myeloma elsewhere. Clinical manifestations of BP usually range from well-defined, single or numerous, breast lumps similar to various lumpy breast lesions. Bone marrow examination is required to rule out involvement of systemic multiple myeloma. Correct initial diagnosis, identification of amyloid in tissue, and its type are important to determine proper management and prognosis of BP.

Keywords: amyloidosis, breast, diagnosis, extramedullary, plasmacytoma

ANAPLASTIC PLASMACYTOMA MIMICKING NON-HODGKIN LYMPHOMA: A RARE CASE

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Background: Plasmacytoma is a rare type of plasma cell neoplasm, which reportedly accounts for less than 5% of all plasma cell neoplasms. The anaplastic form is even more uncommon. Based on its location, plasmacytoma is classified into intramedullary and extramedullary. Lymph nodes are one of the few locations where extramedullary plasmacytoma can emerge. **Case Description:** A 70-year-old male presented with an 11-year history of an asymptomatic marble-sized lump affecting the left neck. The lump had been growing slowly in the last six months. A Computed Tomography (CT) scan revealed a left cervical soft tissue mass that pressed against surrounding organs. Histopathological examination of the left cervical lymph nodes showed large-sized monotonous tumour cells with scanty cytoplasm, round to oval nuclei, irregular membranes, coarse chromatin with partly hyperchromatic, prominent nucleoli (some centrally located and some eccentric with more than one nucleolus), as well as tingible body macrophages and many mitotic figures, leading to the diagnosis of large cell non-Hodgkin lymphoma. However, immunohistochemical markers showed strong negativity for LCA, CD3, CD20, CD30, and CD79A. The Ki-67 labelling index was 90%. Further immunohistochemistry revealed strong positivity of CD138 in all tumour cells. Thus, the final diagnosis was more suitable with extramedullary anaplastic plasmacytoma. **Discussion and Conclusion:** Lymph nodes are one of the few uncommon locations that extramedullary plasmacytoma can emerge and mimic a non-Hodgkin lymphoma. However, distinguishing between these two neoplasms is very important as it can impact the management and prognosis of the patient.

Keywords: anaplastic plasmacytoma, CD138, non-Hodgkin lymphoma

HISTIOCYTIC SARCOMA: A CHALLENGING DIAGNOSIS

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Background: Histiocytic sarcoma (HS) is a rare malignant neoplasm showing morphologic and immunophenotypic features of histiocytes. There are very few true cases HS reported in literature. Given its rarity and histologic overlap with diverse mimics, the diagnosis of HS can be extremely challenging. **Case Description:** A 69 year old male came to hospital with mediastinal lymph node mass. The mass was surgically excised. A histological examination showed sheets of discohesive epithelioid to spindle cell morphology along with large uniform nuclei and prominent nucleoli with focal rimming of lymphoid tissue at periphery. The tumor cells were immunopositive for CD68 and CD163. Negative markers ruled out the other mimics. **Discussion and Conclusion:** HS is an extremely rare and aggressive hematopoietic tumor showing malignant proliferation of cells with morphologic and immunophenotypic features of mature histiocytes. HS commonly present in extranodal site, others present with lymphadenopathy. HR may occur at any age and slight male predominance. A definitive morphological diagnosis of HS is very difficult and may be misdiagnosed as several mimics. Recognition of morphological clues as well as judicious application of immunohistochemical markers to exclude mimics and confirm histiocytic differentiation is crucial. A wrong diagnosis might affect the treatment modalities and outcome for the patient.

Keywords: CD68, CD163, histiocytic sarcoma, immunohistochemistry

SPLENIC INFLAMMATORY MYOFIBROBLASTIC TUMOR

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Background: Splenic Inflammatory myofibroblastic tumor (IMT) is a very uncommon, intermediate malignant tumor with an unknown cause that is most often found incidentally. Since the first two cases were described in 1984 by Contelingam and Jaffe, only about 115 cases have currently been documented in the medical literature. Immunohistochemical staining was done to confirm the diagnosis and rule out any possibilities that microscopic investigation would have suggested. **Case Description:** A 48-year-old man was referred to the digestive surgery department after complaining of pit-of-the-stomach pain, nausea, vomiting, and defecation problems for more than 2 years. Splenomegaly with many splenic nodules was found on radiological examination. When the splenectomy specimen was grossly examined, a tan-white, pliable, and well-defined mass measuring 4.7 x 4.5 x 4 cm was discovered. Histopathological examination revealed a well-defined lesion between the growth of hyalinized blood vessels and the connective tissue stroma, which has some fibrosis, that contained inflammatory cells in the form of plasma cells, histiocytes, lymphocytes, and eosinophils. Positive results from immunohistochemical staining for LCA and ALK and negative results for CD 68 were found, suitable for IMT. **Discussion and Conclusion:** Splenic IMT might present with vague symptoms that make a diagnosis difficult for clinicians to make, or it can resemble other splenic malignant neoplasms and lead to a false positive diagnosis before surgery. If pathologists are unfamiliar with the histologic pattern of these tumors' variants, these tumors could be misdiagnosed. It is challenging to tell this instance apart from Splenic IMT. Immunohistochemical staining was used to confirm the IMT diagnosis.

Keywords: ALK, CD68, LCA, Splenic inflammatory myofibroblastic tumor

EXTRANODAL NK/T-CELL LYMPHOMA NASAL TYPE PRESENTING AS AN ORBITAL TUMOR

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Background: Extranodal NK/T-cell lymphoma is a highly aggressive malignancy from NK cells or a subset of T-cells. Pathologically, it is categorized into two main forms: extranodal NK/T-cell lymphoma; and aggressive NK-cell leukemia. Most commonly, extranodal NK/T-cell lymphoma affects the nasal and upper aerodigestive tract, with less frequent occurrences in other non-nasal areas such as the skin, gastrointestinal tract, testis, and salivary glands. **Case Description:** A 48-year-old woman was suspected with Basal Cell Carcinoma due to an acne-like nodule on the right eye which grew larger and ulcerated. The patient's clinical presentation and imaging highlighted the mass's extension to the nasal and right sphenoid sinus. Total exenteration was performed. Histological examination observed a subepidermal area with dense inflammatory cell infiltrates, including neutrophils, lymphocytes, macrophages, eosinophils, and hemorrhage, but found no malignant cells. Immunohistochemistry with LCA, CD3, and CD56 demonstrated features consistent with peripheral T-cell lymphoma, ultimately leading to the diagnosis of extranodal NK/T-cell lymphoma nasal type. **Discussion and Conclusion:** In this case, the extranodal NK/T-cell lymphoma nasal type manifested as an orbital tumor, which is a relatively rare presentation. Immunohistochemistry played a crucial role in arriving at the correct diagnosis. The rarity of orbital involvement in extranodal NK/T-cell lymphoma nasal type underscores the need for multidisciplinary collaboration between ophthalmologists, pathologists, and oncologists. Early and accurate diagnosis is crucial for determining the appropriate treatment strategy. Further research is needed to improve understanding of the disease and optimize patient outcomes.

Keywords: immunohistochemistry, NK/T-cell lymphoma nasal type, orbital tumor

FOLLICULOTROPIC MYCOSIS FUNGOIDES

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Background: Folliculotropic Mycosis Fungoides (FMF) is the most common case among all variants of Mycosis Fungoides besides Classic Mycosis Fungoides with a worse prognosis than other variants. An understanding of the clinical features and histopathological features of Mycosis Fungoides and its variants is greatly needed in establishing a diagnosis, especially in perspective of Pathology. **Case Description:** A 11 year old girl came with a rash on her right cheek since 3 weeks ago and is increasing in size. On physical examination, there was an erythematous plaque on the right cheek about 2 cm from the nasolabial fold. Microscopic examination showed scattered and infiltrative atypical lymphocyte cells, infiltrative among follicles. The hair follicles showed a degenerated epithelial and cystically dilated epithelium containing follicular mucinosis. Immunohistochemistry shows positive CD3, CD4, CD5, and 10% of Ki67. **Discussion and Conclusion:** Although it occurs in 50% of lymphoma cases, cases of Mycosis Fungoides are generally rare. The Folliculotropic Mycosis Fungoides variant is the most common among all the Mycosis Fungoides variants besides Classic Mycosis Fungoides with a worse prognosis than the other variants. It is important to carry out a biopsy examination to assess whether there is an MF lesion, especially Folliculotropic MF in the specimen being examined, moreover if the clinical manifestations in this case vary greatly depending on the stage of the lesion. Special examinations such as immunophenotyping and immunohistochemistry are also very influential in establishing the diagnosis of Folliculotropic MF.

Keywords: follicular mycosis fungoides, plaque lesion

MEDULLOBLASTOMA

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Background: Medulloblastoma is an embryonal neuroepithelial tumor that usually appears in the posterior fossa, histologically characterized by the presence of small cells, poorly differentiated with a ratio of nuclear and cytoplasm (N:C), high mitosis and apoptosis. A residual tumor >1.5 cm2 is found which is a worse prognosis in pediatric patients after medulloblastoma surgery. Relapse after therapy is occurs in 30% of patients and always fatal. Relapse accounts for 10% of deaths in medulloblastoma. **Case Description:** We report a case of an 8 year old boy with complaints of a mass in the posterior fossa. Performed surgery and histopathological examination of the operating tissue. On macroscopic examination, received surgical tissue from the posterior fossa region, black in color and rubbery in consistency. On microscopic examination of the tissue preparation from the mass in the posterior fossa region, tumor cells with relatively uniform nuclei, small, round, oval, hyperchromatic, prominent nuclei, irregular nuclear membrane, scanty cytoplasm and eosinophilic are seen. Here is a picture of Homer Wright Rossete. The stroma consists of fibrous connective tissue infiltrated with inflammatory lymphocytes. Blood vessels are dilated and congested with interstitial bleeding. The results of a postoperative CT scan showed that it was difficult to determine whether there was still a residual tumor mass. **Discussion and Conclusion:** Based on the results of macroscopic and microscopic examination, this case was diagnosed as medulloblastoma, WHO CNS grade IV, ICD-O 9470/3 and topography C.71.9.

Keywords: death, medulloblastoma, residual, relaps

RETROBULBAR MUCINOUS CYSTADENOMA: A RARE CASE REPORT

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Background: Mucinous cystadenoma is a type of cystic neoplasm that can be found in the orbital cavity, including the retrobulbar area. These cases are rare and rarely discussed in the literature. **Case Description:** A 24-year-old woman came with complaints of proptosis of the right eye that had been noticed 10 years ago. Recently, the patient has also complained of pain in the eyeball to the right side of the head accompanied by decreased vision. Imaging examination showed a retrobulbar mass, suspected hemangioma, with optic nerve glioma as differential diagnosis. During the surgery, a cystic mass was found, and a cystectomy was performed with the size of the cyst 2x1x0.7 cm. Microscopically, the cyst wall appears undulating, lined with single layer or stratified columnar epithelium, without signs of atypia, some of which appear atrophic. These cells show columnar morphology, cytoplasm contains intracytoplasmic vacuoles, round oval nucleus, regular nuclear membrane, smooth chromatin, inconspicuous nuclei. The lumen of the cyst contains amorphous material. The surrounding connective tissue appears swollen and contains foci of very light distribution of lymphocyte inflammatory cells. Postoperatively, the patient's condition improved followed by an increase in vision. **Discussion and Conclusion:** Retrobulbar mucinous cystadenoma is a very rare orbital tumor. The symptoms can mimic those of other orbital tumors, such as proptosis and decreased vision. Based on macroscopic and morphological considerations, this case was diagnosed as retrobulbar mucinous cystadenoma, with a fairly good prognosis.

Keywords: cystic tumor, mucinous cystadenoma, retrobulbar

RARE CASE REPORT: TUBERCULOMA MIMICKING GERMINOMA IN THE PINEAL REGIO

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Background: Tuberculoma of the pineal region is a rare case plus the histological finding of tuberculoma mimicking germinoma. Tuberculoma is a systemic disease that can attack various organs, including the Central Nervous System (CNS) in 5-10% of cases. The location of the pineal region causes clinical suspicion of a germinoma. **Case Description:** We report the case of a 21 year old man who presented with complaints of intermittent double vision for 7 months, his eyes appeared crossed. Headaches and dizziness are absent. Another complaint is when walking unsteadily. Radiological examination revealed hypocellular, hypovascular lesions and extensive edema in the pineal region consistent with an inflammatory process, a differential diagnosis of tuberculoma. The final results of the anatomic pathology reporting were consistent with tuberculoma mimicking germinoma. After surgery, the patient was given tuberculosis category 1 treatment (OAT FDC category 1) RHZE 150/75/400/275 for 2 months. **Discussion and Conclusion:** The importance of collaboration between fields, especially clinical, radiological and anatomical pathology in determining a definite diagnosis, especially in these rare cases, is to provide appropriate therapy so that the prognosis will be good too.

Keywords: germinoma, region pineal, tuberkuloma

A RARE CASE OF CUTANEOUS CLEAR CELL TYPE SQUAMOUS CELL CARCINOMA

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Background: The Clear cell squamous cell carcinoma (SCC) of skin is extremely rare. Its Etiology has consistently been linked to ultraviolet radiation and HPV in the literature. However, there is little definite information about this case in Indonesia. **Case Description:** This is a case of a 76- years-old female who presented with a 2 years history of experiencing gradually enlarging, no healing ulcer on her right thigh. Histology showed features of tumor cells composed of round/oval nucleus, pleomorphic up to bizarre, generally clear cytoplasm. The lesion was also positive for CK5, EMA, and Ki-67 (immuno-stain). The patient's tumor was found to be recurrent with lymphovascular invasion. The patient was referred to get chemotherapy, however, the patient did not continue the treatment. **Discussion and Conclusion:** SCC of the skin is a challenging clinical entity as it doesn't have any clinical features to distinguish them from conventional SCC. Based on histology and IHC markers, we confirmed the diagnosis as a clear cell variant of SCC. We note a pleomorphic to bizarre tumor cell in this case so it's classified as Type III clear cell type SCC. This variant is rare and presents diagnostic challenges. Continued studies of cases reported in the literature may make for a better understanding of these rare tumors.

Keywords: clear cell, squamous cell carcinoma, skin

A RARE CASE OF RECURRENT POROMATOSIS WITH A HISTORY OF CHEMOTHERAPY DUE TO BREAST CANCER

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Background: An eccrine poroma (EP) is a benign adnexal tumor from eccrine sweat ducts that typically present as a single lesion. Rarely, eccrine poromas can occur as multiple lesions, defined as poromatosis Poromatosis generally developed in immunosuppressed patients after receiving treatment for malignancy. To date the etiology has yet been described. **Case Description:** We report the case of a 52-year-old female with a history of breast cancer who had undergone radical mastectomy and a one year of chemotherapy. She was presented with six reddish pedunculated papules and nodules scattered on the trunk and extremities. She also has a history of poromatosis one year after breast cancer treatment. Electrocauterization and biopsy for six lesions were done. Histology shows tumor cells with a poroid center and eosinophilic cytoplasm that connects with orthokeratotic epidermis followed by ductal differentiation. **Discussion and Conclusion:** Poromatosis is an extremely rare type of eccrine poroma. In the majority of cases its present in extremities and at the irradiated site. This study provided the first record on recurrent poromatosis of a patient with a history of breast cancer and chemotherapy. To predict the exact etiology and prognosis of this rare variant more case reports are expected to be published in future.

Keywords: chemotheraphy, eccrine poromatosis, poromatosis, recurrent poromatosis

PRIMARY CUTANEOUS T-CELL LYMPHOMA WITH ABERRANT EXPRESSION OF CD20: A CASE REPORT

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Background: Primary cutaneous lymphomas are defined as non-Hodgkin lymphomas presenting in the skin with no evidence of extracutaneous disease at the time of diagnosis. Included in this category are cutaneous T-cell lymphomas (CTCLs) and cutaneous B-cell lymphomas (CBCLs). Even though both have their own characteristic clinical and histological features, in order to diagnose patients correctly, it is crucial to obtain complete clinical history, integrated with histopathological, immunophenotypical, and molecular data. **Case Description:** A 57-year-old male with history of multiple red spots on the right thigh and torso since 2 years ago which enlarged in the last 8 months. He went through multiple biopsy procedures which showed partly atrophic epidermis with lymphocyte exocytosis forming microabscess and occupying superficial until deep dermis. Other laboratory examinations revealed no significant blood involvement, no Sezary cell, elevated LDH (239 U/L). Immunohistochemistry result showed diffuse positivity for CD3, CD20, CD8, BCL2, and CD45; negativity for CD4, CD30, CD56, perforine, granzyme, BCL6, CD79a, PAX5, TIA, TdT, and CD99 with Ki-67 positivity in 30% of cells. **Discussion and Conclusion:** In this patient, there were multiple skin tumours which progressed significantly, showing T cytotoxic phenotype without expression of cytotoxic proteins, and with aberrant expression of CD20 and high Ki-67 index. It was then decided as primary peripheral CTCL, NOS with aberrant expression of CD20. Therefore, differentiation of lymphoid infiltrates of the skin needs careful synthesis and integration of the clinical, histopathological, immunophenotypical, and molecular features when available, especially in cases with non-classical findings.

Keywords: abberant, CD20, lymphoproliferative, primary cutaneous T-cell lymphoma.

INTRAVENTRICULAR GERMINOMA: REPORT OF A VERY RARE CASE

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Background: The primary intracranial germ cell tumor (GCT) is rare, constituting ~ 0.3-0.6% of intracranial neoplasms The most common GCT is germinoma with the pineal gland being the most favored site followed by suprasellar regions. Germ cell tumors in intraventricular location are extremely rare. **Case Description:** A 29-year-old man was admitted to hospital with a 6 month history of headaches, nausea and vomiting with history of ventriculoperitoneal shunt installation 4 months ago. MRI with contrast showed an extraaxial mass, irregular edges, calcified, measuring 6,1x4,8x4,9 cm on corpus callosum, which pushed and narrowed the right lateral ventricle, causing bilateral lateral ventricular dilatation. Histopathological examination showed sheet of tumor cells interspersed by delicate fibrovascular septa infiltrated by mature lymphocytes. Tumor cells have round, large, atypical nuclei with prominent nucleoli and clear cytoplasm. Immunohistochemistry for CD117 showed strong membranous positivity. **Discussion and Conclusion:** Clinical presentation of intracranial germ cell tumor depends on the location, duration and histological type of the tumor. In this case, the symptoms were caused by obstruction to the flow of cerebrospinal fluid leading to obstructive hydrocephalus. MRI with contrast showed an intraventricular mass which was thought to originate from the corpus callosum. However, on histopathological examination, there was ependymal cells, a single layer of cuboidal epithelium-like cells with cilia on apical. It indicated that the tumor originated from the ventricle. The typical histopathological features with positive CD 117, correlated with radiological examination, confirmed that the case was an intraventricular germinoma.

Keywords: extra axial mass, lateral ventricle, intraventricular germinoma

MUCOID MENINGIOMA HISTOLOGICALLY MIMICKING METASTASIS OF MUCOID CARCINOMA

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Background: Meningioma is a benign tumor of the lining of the brain that is often found in cases of neurosurgery. The incidence of meningioma reaches 35% of all primary tumors of the central nervous system. Meningiomas may behave aggressively such as invasion of the brain, dura mater, and recurrences may occur. There are many subtypes of meningioma, and the pathologist must be alert to rare subtypes, so as not to misdiagnose. **Case Description:** This case occurred in a 44-year-old woman, with complaints of headaches that did not go away. The CT scan showed a mass in the right frontal lobe, with a diagnosis of supratentorial neoplasm. With a clinical diagnosis of benign supratentorial neoplasm, suspected meningioma. An operation was performed, in the form of an extra axial tumor, reddish gray in color, well defined, located in the falk cerebri duramater, and was sent to the Pathology Anatomy Laboratory. From routine histopathological examination with HE smears, the appearance resembles metastatic mucoid carcinoma, due to the abundant mucoid degeneration throughout the tumor mass. CPI examination was carried out in the form of CK with negative results, TTF1 with negative results, and vimentin with positive results, and negative Ki67. From histopathological examination and CPI, a conclusion was made of mucoid meningioma. **Discussion and Conclusion:** Central nerve tumor with features of profuse mucoid degeneration, the pathologist must be careful in making the diagnosis. Histologically, mucoid degeneration is resemblant to metastatic mucoid carcinoma. The pathologist should consider the clinical suspicion of the diagnosis. In addition, you also have to know the subtype of meningioma, which are frequent or rare cases, so that there is no mistake in diagnosing, because it will result in an error in giving therapy and subsequent management of the patient. Mucoid meningioma is a rare case, and if it is not careful it can lead to a misdiagnosis due to its similar appearance to metastatic mucoid carcinoma. CPI examination can rule out DD from metastatic mucoid carcinoma.

Keywords: metastatic mucoid carcinoma, mucoid meningioma

DIGITAL PAPILLARY ADENOCARCINOMA OF THE FINGER

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Background: Digital papillary adenocarcinoma is a rare malignancy of eccrine gland with predilection at the acral region, particularly on the toes and fingers. There are still few cases reported, about 200 cases have been reported. Histologically this tumour is similar to the usual adenocarcinoma. **Case Description:** A 14-year-old girl came to the hospital with complaints of a lump on the little finger of her right hand. The lump has grown since a year ago, is growing slowly, and there is a history of trauma. Clinically diagnosed as a benign tumour and performed surgery. On histopathological examination, macroscopically, the mass was 3x2x1 cm, in size, polypoid in shape, greyish white in colour, firm. Microscopically, revealed a well-defined tumour mass in the dermis to the subcutis, with a nodular, cystic, papillary, pseudopapillary, consisting of large cells, oval-shaped, polygonal, rounded nucleus, hyperchromatic, vesicular, prominent nucleolus, eosinophilic cytoplasm, with profuse dilated vessel and lymphovascular invasion. The skin adnexal appeared within normal. Ki67 immunohistochemical examination showed positive results, and p63 was positive in basal cells. **Discussion and Conclusion:** Based on histopathological examination and clinical location, this case consistent to digital papillary adenocarcinoma. Based on age, this case have occurred at the age of 14-83 years, it was more common in men and fingers. The results of immunohistochemical examination of p63 and Ki67, cell atypia, lymphovascular invasion, support the diagnosis and the tendency for aggressiveness of the tumor, so based on the literature more intensive therapy and observation is needed.

Keywords: aggressive, digital papillary adenocarcinoma, finger

APOCRINE CARCINOMA OF THE ORBITA

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Background: Apocrine carcinoma in the eye area is very rare. Due to the rarity of cases, the published data are mostly case reports and the epidemiological data on this carcinoma is still unclear. From a clinical point of view, the ocular and peri-ocular areas impose difficulties when it comes to obtaining representative samples biopsies. Therefore, the diagnosis of apocrine carcinoma in the orbital area is very challenging. **Case Description:** A 58-years-old man came with complaints of protruding right eye since the last few years. Physical examination revealed proptosis of the right eye and limited extraocular movement. Multi-slice computerized tomography (MSCT) of the orbit showed a soft tissue mass in the right frontal region that was pushing the right ocular bulb anteriorly and inferiorly causing exophthalmos. The patient underwent a biopsy and the diagnosis of apocrine carcinoma was made based on histopathological examination, and immunohistochemical examination which showed positive expression of GCDFP-15 and androgen receptor (AR). **Discussion and Conclusion:** Clinically and histopathologically, apocrine carcinoma of the orbit may resemble other lesions in the same location, so careful macroscopic and microscopic examination is needed to avoid misdiagnosis. Most apocrine carcinomas present as recurrent eyelid lesions that are often misdiagnosed clinically. Pitfall on histopathological examination generally occurs due to failure to identify the main features of apocrine tumors. In cases with indistinct morphology or small tissue specimens, immunohistochemical examination is very useful to identify apocrine differentiation, including using the GCDFP-15 and AR marker.

Keywords: adnexal tumor, androgen receptor, apocrine carcinoma, GCDFP-15, orbita

CLINICOPATHOLOGICAL CHARACTERISTICS OF LOW-GRADE SEROUS CARCINOMA OVARIUM AT HASAN SADIKIN HOSPITAL BANDUNG FROM 2017 TO 2023

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Background: Low-grade ovarian carcinoma (LGSC) is an invasive serous neoplasm with low-grade malignant features exhibits a variety of pattern including small nests, glands, papillae and micropapillae. LGSC is often difficult to distinguish from another ovarian epithelial tumors, so it is necessary to do immunohistochemical examination with PR, WT1, and p53 and found *psammoma bodies* in HE staining. **Objective:** The aim of this study is to describe the clinical and histopathological characteristics of low-grade serous ovarian carcinoma in Hasan Sadikin Hospital Bandung from 2017 to 2023. **Methods:** We reviewed medical records from low-grade serous ovarian carcinoma patients between January 2017 and July 2023 includes age, lateralization, size and histopathological examination was carried out and analyzed. **Results and Discussion:** There were 24 cases of LGSC with an average age is 42(16.17) years and more often in the right ovary 11(46%)samples. The size of the tumor varies between 2-30cm with an average of 12.9(5.90)cm. Histopathological features obtained papillary growth patterns(11;45.83%) with all cases showing low proliferation (mitotic number <3/HPF). Necrosis area were obtained in 13(54.17%) samples with psammoma bodies 6(25.00%) samples. Invasion of the uterus was found in 3(12.50%) cases and invasion of the lymph nodes was found in 3(12.50%) cases. **Conclusion:** The clinicopathological feature obtained is in accordance with WHO 2022, but the difference obtained is high necrosis, which should be rare. LGSC often occurs in the right ovary with a papillary growth pattern and has a low proliferation rate, but metastases can be found.

Keywords: low-grade serous carcinoma ovarium, LGSC, clinicopathology

THE PROFILE OF EPITHELIAL OVARIAN CARCINOMA (EOC) IN BADAN PENGUSAHAAN BATAM HOSPITAL

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Background: Ovarian cancer is the 7th leading cancer in incidence (3,4%) after breast, colorectal, lung, cervix uteri, thyroid, corpus uteri and stomach cancer among women worldwide according to Globocan, 2018. Ovarian cancer in Indonesia is the 3rd most leading cause of cancer death, after cervix and breast cancer. The most common type of ovarian cancer is epithelial ovarian carcinoma (EOC), which most prevalent in older women. **Objective:** This study was aimed to describe clinicopathological profile of EOC in Badan Pengusahaan Batam Hospital from January 2022 to December 2022. **Methods:** This is the observational analytical study using data of ovarian cancer patient medical records at the laboratory of pathological anatomy in Badan Pengusahaan Batam Hospital. Data collection include : age of diagnosis, location, size tumor and histological subtype. 39 EOC patient were included in this study. **Results and Discussion:** Most of EOC patient (64%) were diagnosed more than 40 years old. 84% of EOC patient had unilateral location. 54% of patient had size tumor less than 14 cm in diameter. Histological subtype of patient was mostly mucinous carcinoma (28%). **Conclusion:** EOC patient in Badan Pengusahaan Batam Hospital was mostly diagnosed at more than 40 y.o, had unilateral location, tumor size less than 14% and had mucinous carcinoma subtype.

Keywords: age, histology type, mucinous carcinoma, ovarian cancer, size

ATYPICAL ENDOCERVICAL CELLS WITHIN ENDOCERVICAL POLYP: PITFALLS IN PAP SMEAR DIAGNOSIS

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Background: Atypical endocervical cells (AEC) in Pap smears represent a significant aspect of cervical cytology. The presence can signal a range of potential issues, including inflammation, infection, reactive changes, or even neoplastic processes. AEC often pose diagnostic challenges due to their morphological complexity and overlap between benign and malignant features. This case reports an abnormal pap smear in a non-neoplastic lesion of endocervical polyp. **Case Description:** A 48-year-old female presented with postcoital bleeding. She had no other systemic complaints, never used any form of contraceptive, and never had a Pap smear before. On vaginal examination, a 2 cm polypoid lesion was found extruding from cervical os. The cytologic examination of the Pap smear showed hyperchromatic crowded groups and strips of cells, nuclear enlargement, and chromatin irregularities with increased nuclear to cytoplasmic ratio. Colposcopy biopsy was performed and the histopathology examination showed proliferation and dilated of endocervical glands, some part of the epithelium was reactive. **Discussion and Conclusion:** The Bethesda categories AEC been proven to have a progressively better association with neoplasia. These characteristics include hyperchromasia, chromatin heterogeneity, nuclear enlargement, crowding, and change in size as shown in the case. This case showed atypical cellular changes in nonneoplastic processes that may lead to interpretive difficulty and became significant pitfall in the interpretation of glandular changes, so it is very important to evaluated for nuclear and architectural features of glandular lesions. Further investigations, such as colposcopy biopsy was recommended to ascertain the underlying cause of these atypical findings.

Keywords: atypical endocervical cells, colposcopy biopsy, cytopatology, pap smears

MATURE CYSTIC TERATOMA WITH MALIGNANT TRANSFORMATION PAPILLARY THYROID CARCINOMA FOLICULAR VARIANT OF THE RIGHT OVARY: A RARE CASE REPORT

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Background: Mature cystic teratomas are the most common ovarian germ cell tumors in women of reproductive age. The malignant transformation of mature cystic teratomas is a rare entity and the most common variant is squamous cell carcinoma, whereas papillary thyroid carcinoma is an exceptional event. **Case Description:** We reported a case of Follicular Variant of Papillary Thyroid Carcinoma arising from mature cystic teratoma in the right ovary, in 34 year old woman with bilateral mature cystic teratomas. The patient underwent bilateral salpingo-oophorectomy. Abdominal CT Scan showed heterogeneous mass with solid predominantly and cystic component. Microscopic examination showed a wall lined by stratified squamous epithelium with mature skin appendages (hair follicles and sebaceous glands) and mature cartilage component, in the right ovary we found well-developed follicular with focal papillary structures, composed of cuboidal to columner cells. The nuclei have crowded and overlapping, round to ovoid, pleomorphic, with ground glass ('Orphan Annie' eye) appearance, pseudo-inclusions and nuclear grooves. The mitotic figures were rare. The result of TTF-1 immunostaining was positive. **Discussion and Conclusion:** The diagnosis is based on microscopic appearance and IHK staining. Pathologists should be aware of malignant transformation and exclude it when investigating mature cystic teratomas in order to specific and adequate therapy. The clinician should examine other organs of patient especially thyroid organ.

Keywords: ovarian teratoma, papillary thyroid carcinoma, TTF-1

ADENOSQUAMOUS CARCINOMA OF THE CERVIX

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Background: Adenosquamous carcinoma of the cervix is a malignant epithelial tumor that shows squamous and glandular differentiation. These tumors are uncommon but not rare, accounting for about 5-6% of all cervical cancers. **Case Description:** We report a case of a 55-year-old woman with complaints of vaginal bleeding. Performed surgery and histopathological examination of the operating tissue. On macroscopic examination, several pieces of tissue were received from the cervix, gray in color, uneven surface, spongy consistency, nodular or polypoid-shaped tissue mass was seen and accompanied by a hemorrhagic mass. On microscopic examination of cervical tissue showed glandular proliferation with a tubular structure covered by a columnar epithelial with enlarged nuclei, pleomorphic, coarse chromatin, prominent nucleoli, irregular nuclei membrane and eosinophilic cytoplasm. There was also a proliferation of malignant squamous epithelial cells, with enlarged nuclei, pleomorphic, coarse chromatin, prominent nucleoli, eosinophilic cytoplasm and the basement membrane not intact. **Discussion and Conclusion:** Based on the results of macroscopic and microscopic examinations, this case was diagnosed as adenosquamous carcinoma of the cervix, ICD-O coding 8560/3.

Keywords: adenosquamous, cervix, differentiation, uncommon

VULVAR ANGIOFIBROBLASTOMA: A RARE CASE

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Background: Angiofibroblastoma is a mesenchymal benign tumor derived from progenitor cells that is rarely found. These lesions can be found in both men and women and are clinically difficult to distinguish from Bartholin's cysts due to their slow, protruding nature over the skin. **Case Decription:** 44-year-old woman with complaints of pain in the female organ since 3 days before admission to the hospital. Physical examination of the vulva obtained a lump measuring 5x3 cm, red color with positive tenderness. The patient underwent extensive excision and microscopic showed hypocellular and hypercellular firm boundary masses, consisting of proliferative thin wall blood vessels and stroma containing spindle and epitelioid form cells, binucleation, smooth chromatin, no atypical mitosis and with eosinophilic cytoplasm. **Discussion and Conclusion:** Histological angiofibroblastoma should be distinguished from aggressive angiomyxoma (AA), cellular angiofibroma (CA) and superficial angiomyxoma (AS) due to different therapy management. Microscopic AA shows an infiltrative lesion whereas CA clinically tends to have a smaller size and AS that gives a picture of the myxoid stroma and thickened blood vessels. Vulvar angiofibroblastoma is a mesenchymal benign tumor in the vulvar area. Marsupialized surgical excision surgery is the best treatment, and long-term follow-up is necessary to avoid recurrence or other complications.

Keywords: angiofibroblastoma, mesenchymal tumor, vulva

THE ROLE OF SEE-FIM PROTOCOL IN DETECTING HGSCs PRECURSOR LESIONS: A CASE REPORT

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Background: High grade serous carcinomas (HGSCs) are among the most common and fatal type of ovarian cancer. Sectioning and Extensively Examining the fimbriated End (SEE-FIM) of the fallopian tube protocol was developed for the early detection of precursor lesions and also in designating the primary site of origin, which was implied in this case. **Case Description:** A 61-year-old postmenopausal woman presented to our gynaecology clinic with lingering abdominal discomfort and no other significant symptoms. Transvaginal ultrasound showed 40% solid cystic mass in the left ovary, and increased Ca-125 level, 117.4 units/mL. The patient then underwent a total hysterectomy with bilateral salpingo-oophorectomy and surgical staging. The definitive histopathological diagnosis was HGSC of the left ovary with serous tubal intraepithelial carcinoma (STIC) origin, with the implementation of the SEE-FIM protocol. **Discussion and Conclusion:** The most common site of origin for HGSC is the fallopian tube epithelium (FTE), followed by ovarian surface epithelium (OSE). Besides the underlying risk factors that ought to induce HGSC, some molecular alterations including *p53* and *BRCA 1/2* somatic mutations are in the line for the disease progression. Therefore, implementing the SEE-FIM protocol in ovarian cancer cases, including HGSCs, combined with molecular testing, are important to have a better understanding of the pathogenesis, and aid a more detailed diagnosis for cancer registries.

Keywords: fallopian tube, HGSC, ovarian cancer, SEE-FIM

GIANT PLACENTAL CHORANGIOMA

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Background: Giant placental chorangioma is a very rare vascular benign non-trophoblastic neoplasm with an incidence of 1:3500-1:90000 births. This disorder is often associated with poor fetomaternal complications and there are not many recent case reports from Indonesia. **Case Description:** We report a 41-year-old woman, G5P1A3, 37 weeks of gestation with a history of 2 consecutive hydatidiform moles, came to give birth with ultrasound results of a large circumscribed cystic hypoechoic mass in the placental parenchyma measuring 7,73 cm x 4,92 cm and polyhydramnios. A cesarean section was performed and placental examination revealed a whitish brown tumor mass, some were slightly dark and had a rubbery consistency in the fetal surface of the placenta. Microscopic examination revealed a well-circumscribed tumor with the proliferation of fetal capillaries surrounded by dense fibro collagenous connective tissue stroma, partially edematous with few myxoid degeneration. The immunohistochemical staining showed positivity for CD31 and CD34 markers. **Discussion and Conclusion:** This case is interesting because of a history of 2 consecutive hydatidiform moles in previous pregnancies, although it could not be scientifically linked to the giant chorangioma and polyhydramnios. Clinical, radiological, histopathological, and immunohistochemical data confirmed the diagnosis of giant placental chorangioma of the angiomatous type.

Keywords: giant chorangioma, placenta, CD31, CD34

NEUROENDOCRINE CARCINOMA OF THE CERVIX: CASE SERIES

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Background: Neuroendocrine carcinoma of the cervix (NECC) is a rare variant, constituting only 2% of cervical cancer cases. NECC is characterized by its aggressive behavior and poor prognosis. It frequently coexists with squamous cell carcinoma (SCC), adenocarcinoma, or even carcinoma in situ. Furthermore, an undetected neuroendocrine component might lead to mismanagement and worsened prognosis. **Case Description:** Four cases were presented, all displaying abnormal vaginal bleeding and an exophytic carcinomatous mass in the cervix. In the first two cases, aged 52 (FIGO stage IB2) and 48, H&E staining revealed round to oval-shaped tumor cells forming glandular structures initially interpreted as adenocarcinoma. The remaining two cases, aged 51 (FIGO stage IIIB) and 54 (FIGO stage IVA), exhibited round to oval-shaped tumor cells with solid structures initially identified as non-keratinizing SCC and differential diagnosed with NECC. However, upon further examination, all cases exhibited positive staining for chromogranin and/or synaptophysin and displayed a high Ki67 index. Follow-up revealed metastatic bone disease in one case, tumor recurrence in two others a year after complete response, and the last case was lost to follow-up. **Discussion and Conclusion:** Distinguishing NECC from other carcinoma types based solely on H&E staining is challenging due to its varied histopathological patterns—trabecular, tubular, syncytial, and solid. Key NECC features, including architectural and cytological attributes, as well as its clinically aggressive nature, provide valuable insights into considering this diagnosis. In these cases, confirmation of NECC relied on immunohistochemistry assessment of chromogranin, synaptophysin, and Ki67.

Keywords: chromogranin, neuroendocrine carcinoma of the cervix, synaptophysin

CLINICOPATHOLOGICAL APPROACH TO THE DIAGNOSIS OF HG-ESS IN YOUNG WOMEN, A CASE SERIES FROM A CANCER CENTER

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Background: HG-ESS is a rare tumor that is particularly common in young women. This case series describe the clinicopathological approach of HG-ESS diagnosis, higlighting the use of ancillary techniques in pathology. **Case Description:** The three patients in this case series were 50, 47, and 16 years old at the time of diagnosis. All patients had undergone histological examination at a prior hospital before being referred to the Dharmais Cancer Center Hospital. All cases were reviewed histologically and then proceed to immunostaining. Radiological examinations were performed at the Dharmais Cancer Center Hospital to establish the staging of the HG-ESS. Immunohistochemical examinations were positive for cyclinD1 in all patients. Patient one was also positive for vimentin and CD10. Patients two and three were positive for SMA respectively. **Discussion and Conclusion:** Immunohistochemical (IHC) staining is a reliable method for identifying low-grade and high-grade endometrial stromal sarcomas. However, histological examination is still commonly performed in rural areas. The three cases in this study demonstrate that younger patients with HG-ESS tend to have a worse prognosis than older patients. This is likely because young women may experience regular menstruation, which can mask the symptoms of the tumor. As a result, these tumors may be detected at a later stage, when they are more advanced and difficult to treat. Patients with convincing symptoms and signs that support radiological examination, particularly young women, should be considered for a diagnosis of HG-ESS.

Keywords: HG-ESS, irregular bleeding, immunohistochemical, young woman

MIXED INVASIVE BREAST CARCINOMA OF NO SPECIAL TYPE AND INVASIVE MICROPAPILLARY CARCINOMA

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Background: Invasive breast carcinoma (IBC) is a malignant epithelial neoplasm of the glandular elements of the breast. Invasive breast carcinoma no special type *(*IBC NST) and invasive micropapillary carcinoma are special subtypes of IBC. The terms mixed IBC-NST used when 10–90% of the cancers are present. **Case Description:** Reported the case of a 72-year-old woman with a lump in the left breast since 1 year ago. Performed surgery and histopathological examination. On macroscopic examination, the mass have gray color, uneven surface and rubbery consistency. On microscopic examination, tumor mass consisting of cuboidal to columnar epithelial cells, arranged morula-like aggregates in empty space and surrounded by stroma fibrocollagenenous with nucleus enlargement, pleomorphic, hyperchromatic, eosinophilic cytoplasm partially granular. Myoepithelial cells could not be identified. Mitoses easy to find (>15 mitoses/10 LPB, field area 0.196 mm2). In another focus, tumor mass arranged solidly consisting epithelial cell with nucleus enlargment, pleomorphic, coarse chromatin partially hyperchromatic, prominent nuclei, nuclear membrane irregular, eosinophilic cytoplasm. The stroma consists of fibrocollagenous connective tissue infiltrated moderate with lymphocytes inflammatory cells. In certain foci, there is lymphovascular invasion but no found perineural invasion. **Discussion and Conclusion:** Based of macroscopic and microscopic examination, this case was diagnosed mixed IBC NST (ICD-O code: 8500/3, topography morphology C50.9) and invasive micropapillary breast carcinoma (70%) (ICD-O coding: 8507/3), notingham grading system grade 3 of 3 (Poorly differentiated) (tubular score: 2, core score: 3, mitotic score: 3, total score: 8), LVIs (+), PNI (-), Tils moderate (< 50%).

Keywords: IBC NST, micropapillary, mixed

INVASIVE MICROPAPILLARY CARCINOMA IN A MALE: REPORT OF A RARE CASE

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Background: Breast cancer is rare in men, with an incidence rate of less than 1% of the total cases of breast cancer. Invasive micropapillary carcinoma is an aggressive type of breast carcinoma, reported between 0-11% of all breast cancers in men. **Case Description:** Male, 63 years old, complained of a marble sized lump in the right breast since 2 months. Ultrasound obtained a solid mass at 9 o'clock in the peri-nipple suggesting malignancy. Tumor excision tissue measuring 2.5x2.5x1.5 cm, gray-white in color, ill-defined margin, firm and firm consistency. On microscopic examination, the tumor mass was composed of proliferating neoplastic epithelial cells that formed morula-like pattern (>90%), tubular (<10%), infiltrative in the stroma of connective tissue and adipose tissue, partially immersed in a clear space with inside- out growth pattern. Cell morphology is round-oval, with eosinophilic cytoplasm, increased N/C ratio, irregular nuclear membrane, moderate nuclear pleomorphia, vesicular chromatin, prominent nucleoli. Mitosis 4/10HPF. Immunohistochemical examination showed positive ER and PR, negative HER-2 (+1) and positive Ki-67 in 10% of tumor cell nuclei. **Discussion and Conclusion:** Invasive micropapillary carcinoma is characterized by malignant cells in a hollow or morula-like pattern with an inside-out growth pattern, surrounded by clear spaces. Histological grade and molecular type were determined using the same method as other invasive breast carcinomas, but this type has a worse prognosis than the Not Otherwise Specified type. This case can be concluded as an Invasive micropapillary carcinoma of the breast, grade 2, Luminal A, in male, with a poor prognosis.

Keywords: breast carcinoma, Invasive micropapillary carcinoma, male breast cancer

RARE MIXED GERM CELL PRIMARY THYROID TUMOR: A CASE REPORT

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Background: Thyroid germ cell tumors are thyroid tumors that consist of both mature and immature tissue derived from the three germ cell layers (ectoderm, mesoderm and endoderm). Germ cell tumors most often occur in the gonads and rarely in extragonadal locations. Germ Cell Extragonadal tumors mainly involve the mediastinum, retroperitoneum and pineal organs, but very rare in the thyroid organs. **Case Descrition:** We report a case of primary mixed germ cell tumor located in the thyroid in a young adult male. A 26 year old male patient with complaints of a lump in the neck accompanied by shortness of breath. On physical examination found a solid mass in the thyroid right lobe 15x15x7 cm. Ultrasound examination of the thyroid revealed a solid cystic mass with punctate calcification in the right thyroid lobe. No tumors were found in other organs. On examination of the thyroid FNAB, a malignancy was found with a differential diagnosis of Poorly Differentiated Carcinoma and Undifferentiated Carcinoma. On bone survey and ultrasound examination of the liver , no metastases were found. The patient has a history of series III chemotherapy prior to surgical removal of the mass. Histopathological examination of thyroid tissue revealed pieces of tumor tissue 20x12x3.5 cm. The tumor contains components of immature teratoma, yolk sac and choriocarcinoma between benign thyroid follicles. **Discussion and Conclusion:** Based on the results of these examinations, it was concluded as Mixed Germ Cell Tumor with components of Immature Teratome, Yolk Sac, and Choriocarcinoma in the thyroid. The patient's condition is currently improving after surgery.

Keywords: extragonadal mixed germ cell tumor, thyroid.

MULTIFOCAL FOLLICULAR VARIANT OF PAPILLARY THYROID CARCINOMA (FVPTC) WITH *BRAF*K601E MUTATION: CASE REPORT

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Background: *BRAF* mutation is a genetic disorder which is generally associated with papillary thyroid carcinoma (PTC). *BRAF*V600E mutation is the most common finding, while *BRAF*K601E mutation is the second. *BRAF*V600E mutation is associated with a more aggressive and clinically persistent tumor. In contrast, *BRAF*K601E mutation is strongly related to follicular patterned tumor and is clinically more indolent but have metastatic potential. Molecular examination can help determining the nature of the tumor behaviour so it has an effect to the aggressiveness of therapy and prognosis. **Case Description:** We report a case of multifocal follicular variant papillary thyroid carcinoma (FVPTC) in a 50-year-old woman. The tumors arise on the right and left thyroid, both have *BRAF*K601E mutations and show more or less the same histopathological appearance. The tumors showed a follicular and focal solid pattern, tumor cells nuclei have ground glass appearance and nuclear grooves (nuclei score : 2), no capsular invasion, no extrathyroid extension, no perineural invasion, but lymphovascular invasion was found in the right thyroid tumor. Clinically, no metastases were detected, either to the lymph nodes or to other organs. **Discussion and Conclusion:** *BRAF*K601E mutation in all PTC cases varies between 1-9%. Our case of multifocal FVPTC with *BRAF*K601E mutation currently is the first case reported in Indonesia. The morphological picture in our case mostly showed a low grade tumor. This means that FVPTC with *BRAF*K601E mutation is more similar to FVPTC with *RAS* mutation compared with *BRAF* mutation. *BRAF*K601E mutation in FVPTC is associated with a less aggressive tumor and a better prognosis.

Keywords : FVPTC, multifocal, *BRAF* mutation, *BRAF*K601E

DIAGNOSTIC PREDICTOR OF PAPILLARY THYROID CARCINOMA WITH *BRAF*V600E AND *RAS* MUTATION USING CLINICAL PROFILE, HISTOPATHOLOGICAL CHARACTERISTICS AND PHOSPHORYLATED EXTRACELLULAR SIGNAL-REGULATED KINASE 1/2 EXPRESSION

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Background: Papillary thyroid carcinoma (PTC) is the most common type of thyroid carcinoma with two main driver mutations, *BRAF*V600E and *RAS*. PTC with *BRAF*V600E mutation is more aggressive than *RAS* and must be distinguished to determine therapeutic strategy. **Objective:** This study analyzed the clinical profile, histopathological characteristics and pERK1/2 expression to predict *BRAF*V600E and *RAS* mutation in PTC. **Methods:** This cross-sectional study conducted at RSUPN dr. Cipto Mangunkusumo from March 2022–March 2023. PCR and DNA sequencing was done to 222 PTC patients. pERK1/2 protein expression was assessed using immunohistochemistry. **Results and Discussion:** *BRAF*V600E mutations are associated with histopathological characteristics (nuclear score 3, non-encapsulated, tall cell variants, perithyroidal soft tissue invasion and lymph node metastases), while *RAS* mutations are associated with follicular variants.. The expression of pERK1/2 was significantly higher in *BRAF*V600E and *RAS* than non-*BRAF*V600E non-*RAS*. The *BRAF*V600E prediction model is a nuclear score of 3 + non-encapsulated + aggressive variant + pERK1/2 expression > 10%. Nuclear score of 3, non-encapsulated and aggressive

variant variables each gave a score of 1, while expression of pERK1/2 > 10% gave a score of 2. Total score of 5 predict 82% probability of PTC case having *BRAF*V600E mutation. The prediction model for *RAS* is follicular variant + pERK1/2 expression > 10%. Each variable gave a score of 1. Total score of 2 predict 70% probability of having *RAS* mutation. **Conclusion:** Combination of both prediction models will show *BRAF*V600E-like or *RAS*-like behaviour groups in PTC.

Keywords: *BRAF*V600E, papillary thyroid carcinoma, prediction model, *RAS*

MYOEPITHELIAL CARCINOMA: A CHALLENGING CASE MIMICKING EPITHELIAL, PERIPHERAL NERVE TUMOR

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Background: Myoepithelial carcinoma (MECA) is a rare malignant tumor, comprising <2% of all salivary gland carcinomas. **Case Description:** A case of tumor on 33-year-old woman having a lump on the lower left jaw 6 months before admission to the hospital. Prior histopatologic diagnosis were schwannoma, sarcoma, and pleomorphic adenoma. Second opinion histopatologic review was carried out resulting a diagnosis: Myoepithelial carcinoma with differential diagnosis of spindle cell sarcoma of salivary gland. Immunohistochemical staining showed that S100, SMA, CK, DESMIN were positive. **Discussion and Conclusion:** Myoepithelial carcinoma is a malignancy entirely composed of neoplastic myoepithelial cells with infiltrative growth. Microscopically myoepithelial carcinoma resembles that of a peripheral nerve tumor, making it difficult to differentiate. Myoepithelial carcinoma occurred as primary tumor or could arise from recurrent pleomorphic adenoma and called myoepithelial carcinoma ex pleomorphic adenoma. The tumour cells can form solid, trabecular, and reticular patterns. The stroma can be myxoid and/or hyalinized. Tumour cells display a mixture of spindle, plasmacytoid, epithelioid, and clearcell morphological features. Vacuolated/signet ring-like morphologies have also been described. Tumors usually express myoepithelial markers such as SMA, p63, S100 and cytokeratins. A case of myoepithelial carcinoma was reported, histopathologically mimicking pleomorphic adenoma and a peripheral nerve tumor, immunohistochemical examination was used to clarified to definitive diagnosis.

Keywords: carcinosarcoma, malignancy salivary gland tumor, myoepithelial carcinoma, pleomorphic adenoma, sarcoma

A RARE CASES OF SECRETORY CARCINOMA OF THE SALIVARY GLAND: MAKING THE CORRECT DIAGNOSIS WITHOUT MOLECULAR EXAMINATION

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Background: Secretory carcinoma of the salivary gland is a low grade carcinoma characterized by morphological resemblance to mammary secretory carcinoma and ETV6-NTRK3 gene fusion. **Case Description:** We report a case of 53 year old woman with a lump in the parotid since 6 months. CT Scan of the neck concluded a suggestive of right parotid lymphadenopathy. Histopathological examination of the parotidectomy specimen revealed proliferation of tumor cells forming a microcystic structure with a lumen filled with eosinophilic secretions, cytoplasm of eosinophilic granular and vacuolated. The main differential diagnosis of secretory carcinoma is with low grade acinic cell carcinoma. The two can be differentiated with PAS histochemical staining is positive in secretions and immunohistochemical examination was strongly positive for S100 and negative for DOG1. **Discussion and Conclusion:** Histopathological and immunohistochemical characteristics of secretory carcinoma of the salivary gland resemble secretory carcinoma of the breast. Identification of a t(12;15)(p13;q25) translocation is the gold standard for diagnosis. Some diagnostic pathology laboratories lack the resources to perform molecular analysis to diagnose secretory carcinoma of the salivary gland, there fore morphological and immunohistochemical features being the basis for diagnosis and rule out differential diagnosis. We report a rare case emphasizing the typical morphology of secretory carcinoma of the salivary gland and its immunohistochemical profile to establish the final diagnosis without molecular examination. In low-resource settings where molecular analysis is not available, histopathological examination and use of immunoprofiles are key tools to establish a correct diagnosis.

Keywords: immunohistochemistry, parotid gland, secretory carcinoma

INCIDENTAL FINDING OF FUNGUS BALL IN CHRONIC SINUSITIS

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Background: Chronic sinusitis is inflammation of the paranasal sinus mucosa that may last for 12 weeks or more. Fungal infections are usually associated with chronic rhinosinusitis, which may occur in immunocompetent or immunocompromised patients. Fungus ball is a form of non-invasive fungal rhinosinusitis. Most of the causes of fungus ball are Aspergillus Sp. **Case Description:** A 41year old man with complaints of right nasal obstruction, bad smell, post nasal drip, right facial pain and frequent nosebleeds since 1 month before hospitalization. There was no history of diabetes mellitus or dental treatment. On nasoendoscopic examination, a polypoid and easily bleeding mass was seen in the right nasal cavity, the middle meatus was covered in secretions and pus. No fungus ball was found on nasoendoscopy. The patient underwent Full House FESS (Functional Endoscopic Sinus Surgery) and endoscopic medial maxillectomy. Histopathological examination showed a polypoid-shaped mass, lined with columnar stratified epithelium with goblet cells which was partly erosive, oedematous stroma densely covered with lymphocytes, plasma cells, neutrophils and eosinophils. On the locally erosive mucosa, fungus balls appeared, surrounded by fibrin. There were also several detached fungus balls measuring 0.1-1mm. Fungal hyphae consistent with Aspergillus. Grocott-Gomori Methenamine Silver (GMS) staining was positive in fungus ball. **Discussion and Conclusion:** Fungal sinusitis needs to be considered as a differential diagnosis in patients with unilateral chronic sinusitis, although nasoendoscopy does not reveal "cheesy and claylike" mucus which macroscopically suggests fungus balls. This case can be concluded as chronic sinusitis with fungus balls.

Keywords: aspergillus, chronis sinusitis, fungus ball

AMELOBLASTIC CARCINOMA: A CASE REPORT

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Background: Ameloblastic carcinoma (AC) is a rare, primary odontogenic carcinoma histologically resembling ameloblastoma. It is an intraosseous jaw carcinoma with mandibular predilection. **Case Description:** A 51-year-old male patient with a painful enlargement in the middle of the mandible since 2 years ago. There was an intraoral bleeding, tooth loss and dysphagia. Clinical examination revealed an immobile mass with well-defined borders and tenderness. Radiologic examination showed a radiolucent lesion with destructive bone growth and perforation. Cytology and histopathology features consistent with ameloblastic carcinoma. **Discussion and Conclusion:** Ameloblastic carcinoma, an uncommon and aggressive tumor, affects a broad age range with a median age of 49 and is more prevalent in males. This malignancy stems from odontogenic epithelial cells, retaining characteristics of ameloblastic differentiation but displaying malignancy features. The limited literature on its cytological aspects warrants caution in diagnosis. Histopathological analysis confirmed the diagnosis, revealing varied patterns from ameloblastoma-like structures to solid sheets of basaloid epithelium, accompanied by features like palisading, nuclear polarity reversal, and stellate reticulum. The cells exhibited atypical nuclei, increased mitosis, heightened nuclear-to-cytoplasmic ratio, and disorderly basal cell arrangement, along with central necrosis. Ultimately, the condition was confirmed as ameloblastic carcinoma.

Keywords: ameloblastic carcinoma, malignant, odontogenic

CASE REPORT: CHERUBISM IN A CHILD WITH P.R415Q MUTATION IN THE SH3BP2 GENE - HISTOPATHOLOGICAL AND GENETIC ANALYSIS

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Background: Cherubism is a rare autosomal dominant disorder that occurs in children before the age of 6, characterized by bilateral jawbone and/or maxilla swellings due to mutations in the SH3BP2 (SH3-domain binding protein 2) gene on chromosome 4p16. **Case Description:** A case report of a 9-year-old boy presented with bilateral mandibular asymmetric lumps, hard in consistency, indistinct edges, painless, non-bleeding, and mucosal color. A contrast-enhanced CT scan revealed solid dominant mixed masses in the bilateral mandibular region. Histopathologic examination of bilateral mandibles revealed round, oval to spindle-shaped cells with osteoclast-like giant cells and eosinophilic cuff-like perivascular on edematous stroma. Genetic analysis showed that the patient and her father have single nucleotide polymorphism (SNP) rs121909149 (c.1244G>A), which causes mutation p.R415Q in the *SH3BP2* gene. **Discussion and Conclusion:** Histopathologically, cherubism can resemble other lesions. Establishing a diagnosis of cherubism must be accompanied by genetic testing, specifically the presence of the p.R415Q mutation within the SH3BP2 gene, as demonstrated in this patient. The characteristic histopathological features of cherubism include osteoclast-like giant cells and eosinophilic cuff-like perivascular structures. The degree of cherubism in this patient is categorized as degree I; thus, definitive reconstruction of the mandible has not been undertaken. The patient's condition has remained stable over the past three months of follow-up, with no observed disease progression. The patient is supervised closely, including tri-monthly CT scan assessments and functional evaluations. This case is classified as cherubism based on histopathological and genetic examinations.

Keywords: autosomal dominant disorder, cherubism, SH3BP2 gene mutation

ONCOCYTOMA IN THE SUBMANDIBULAR SALIVARY GLAND: CASE REPORTS

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Background: Oncocytoma is a benign encapsulated neoplasm composed of large epithelial cells with abundant eosinophilic granular cytoplasm. Oncocytoma is a rare tumor representing 0.1% -1.5% of the salivary glands tumor and 80% of tumors are located in the parotid glands. The very low prevalence and the absence of characteristic findings on imaging make this tumor challenging to diagnose. **Case Description:** We report a case of a 40-year-old woman with a chief complaint of a lump in her lower jaw for 10 months before to admission. Initially, the lump was only the size of a marble, growing as big as a tomato and painless lump. A biopsy was carried out with histopathological features in the form of a well-defined tumor mass consisting of round, oval cells that grew hyperplastic. The monomorphic cell nuclei with abundant eosinophilic granular cytoplasm. Oncocytoma under the age of 60 years is rarely reported. **Discussion and Conclusion:** Oncocytoma generally involves the parotid gland, involvement of the submandibular gland is rare. This case is unique due to its younger age and rare location incident. Microscopically, it was a well-defined mass with oncocytic cells with granular eosinophilic cytoplasm and mitoses were difficult to find, growing in a solid, trabecular or tubular pattern. Oncocytoma is a rare tumor with clinical and imaging features indistinguishable from other benign tumors. Because of their rarity, these tumors are often not considered in the clinical differential diagnosis. A definitive diagnosis can only be confirmed on histopathological examination

Keywords: oncocytoma, salivary glands, submandibular

IMMATURE TERATOMA OF THE NASOPHARYNX : A RARE CASE REPORT

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Background: Teratomas are tumors derived from totipotent germ cells and accounting for only 3% of childhood tumor. The most common site for this tumor is sacrococcygeal region (57%) whereas head and neck regions are rarely affected accounting for less than 5% of reported and this is the first case report at dr.Wahidin Sudirohusodo Hospital. **Case Description:** A 7-year-old-girl was reffered to dr.Wahidin Sudirohusodo hospital with chief complaint of obstruction, dyspaghia, and odynophagia and was diagnosed as nasopharyngeal tumor. Radiology examination found nasopharyngeal mass that had destroyed medial wall of maxillary sinus, sphenoid sinus, extends to choana. Microscopic views tissue lined by stratified squamous epithelium and consists of connective tissue, bone trabeculae, glandular tissue, brain tissue with many neuroepithelial (Rosette) components in between. Based on radiological and histopathological examination, we concluded this case as high grade immature teratoma of nasopharynx. **Discussion and Conclusion:** Teratomas are divided by mature and immature teratoma with originating from three germ cell layers. Ectodermal component consists of neural tissue, teeth, skin, and hair. Mesodermal tissue consists of fat, bone, and cartilage, whereas endodermal consists of respiratory or intestinal epithelium. Grading teratomas devide into low grade (Grade 1) dan high grade (Grade 2 and grade 3) based on variable amounts of immature tissues, mostly neuroectodermal tubules and rosettes, seen at low-power magnification. In this case, we can found immature neuroepithelium components (Rosette) in almost all fields of view, so this case is concluded as high grade Immature Teratoma.

Keywords: immature teratoma, nasopharynx, neuroepithelium

ALK-POSITIVE NEUROENDOCRINE CARCINOMA OF THE JAW

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Background: Neuroendocrine neoplasms (NENs) refer to a diverse category of neoplastic growths that affect the epithelial tissue, ranging from benign, well-differentiated neuroendocrine tumors (NETs) to malignant, poorly differentiated neuroendocrine carcinoma (NECs). These tumors are classified based on their morphological features and proliferation index. NEC of the head and neck region is a rare form of cancer, accounting for only 0.3% of all head and neck cancers. **Case Description:** A 53-year-old man reported a lump on his left jaw that had been present for the past six months. A CT scan revealed a large mass in the buccal area towards the left submandibular region. The post-contrast enhancement of the mass was uneven, indicating a possibility of malignancy. A thorax MSCT was also performed, which showed no gathering in the pulmonary and mediastinum regions. The patient was initially diagnosed with non-Hodgkin lymphoma of medium to large cell size type after a histopathological examination at the primary hospital. An immunohistochemical analysis was conducted at a tertiary hospital to confirm the diagnosis. However, the LCA, CD3, and CD20 examination results returned negative. After reviewing the tumor's histomorphology, it was diagnosed as NEC with a possible diagnosis of anaplastic large cell lymphoma. Additional immunohistochemistry analysis was requested to confirm the diagnosis, which included CD30, synaptophysin, and ALK. The results showed a negative expression of CD30 and a positive expression of synaptophysin and ALK, leading to a final diagnosis of ALK-positive NEC. **Discussion and Conclusion:** NECs in the head and neck area are uncommon and can present diagnostic and treatment challenges. It is crucial to conduct a thorough examination of the histomorphology and immunohistochemistry. Targeted therapy that focuses on ALK expression can be an effective treatment option. Patients who test positive for ALK can benefit from sequential ALK tyrosine kinase inhibitors and local therapies, which have been proven to increase survival rates. Therefore, it is critical to determine the ALK expression status in NEC to determine the most appropriate treatment and prognosis.

Keywords: ALK-positive, jaw tumor, neuroendocrine carcinoma

MYOEPITHELIAL CARCINOMA OF THE SALIVARY GLANDS IN THE SINONASAL REGION

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Background: Myoepithelial carcinoma is an infiltrative malignant tumor that consists only of myoepithelial cells. Myoepithelial carcinoma of the salivary glands is a rare case with an incidence of less than 2% of all malignancies in the salivary glands, often associated with a high frequency of recurrence and the possibility of distant metastasis, however myoepithelial carcinoma often appears with benign cytomorphology, making the assessment of malignancy difficult. **Objective:** The aim of this study was to recognize the histomorphology of myoepithelial carcinoma and exclude it from the differential diagnosis. **Methods:** Evaluating the case of a 63-year-old woman with sinonasal mass. Histopathological and immunohistochemical examinations were performed. **Results and Discussion:** On macroscopic examination, several pieces of fragmented tissue were found, the largest size being 4x3x3 cm, the smallest being 2x0.3x0.4 cm. Microscopically, it appears as a solid, trabecular, multinodular mass with infiltrative edges consisting of cells that tend to be uniform, mild atypia, round-oval shape, spindle, dense chromatin, no nuclei visible, eosinophilic cytoplasm, abnormal mitosis are found. The tumor mass had invaded the fibrocollagen connective tissue stroma, was hyalinized, some had myxoid changes. Immunohistochemical results showed double expression of epithelial and myoepithelial markers, namely AE 1/3, EMA, CK7, P63, S100, SMA and GFAP positive. **Conclusion:** Based on clinical, macroscopic, histopathological and immunohistochemical result, we diagnosed this case as sinonasal myoepithelial carcinoma.

Keywords: immunohistochemistry, myoepithelial carcinoma, myoepithelial

PROFILE OF RHABDOMYOSARCOMA IN SEMARANG 2018-2022

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Background: Rhabdomyosarcoma, a malignant mesenchymal tumor with skeletal muscle differentiation. This disease is common in children aged 2-6 years, 75% of cases in boys. Rhabdomyosarcomas are divided into alveolar (20%), embryonal (50%), pleomorphic (20%) and spindle cell/ sclerosing (10%) subtypes. Embryonal rhabdomyosarcoma is the most common subtype with an incidence of 4 cases per one million people. **Objective:** To provide an overview of the profile of cases of rhabdomyosarcoma in the city of Semarang. **Methods:** Descriptive type research, conducted retrospectively from hospital medical record data of rhabdomyosarcoma patients at Rumah Sakit Umum Pusat dr. Kariadi from January 2018 to December 2022. **Results and Discussion:** There were 68 cases of rhabdomyosarcoma, 34 cases (50%) male, consisting of alveolar subtype 28 cases (41%), embryonal 25 cases (37%), pleomorphic 12 cases (18%) and spindle cell 3 cases (4%). Based on the tumor, the most alveolar subtype was in the extremities, 17 cases (61%). Embryonal subtype in the head and neck (64%). Pleomorphic subtype in the extremities (71%). Spindle cell subtype in the extremities (67%). Based on age group, the dominant alveolar subtype was in the age group ≥40 years, 19 cases (68%). Embryonal subtype aged 0 to 9 years, 14 cases (67%). Pleomorphic subtype age ≥40 years, 10 cases (71%). Spindle cell/ sclerosing subtype at age ≥40 years, 3 cases (100%). **Conclusion:** Rhabdomyosarcoma in Semarang city is dominated by alveolar subtype, head and neck location and age ≥ 40 years.

Keywords: profile, rhabdomyosarcoma, Semarang

CLINICOPATHOLOGICAL FEATURES OF RHABDOMYOSARCOMA AT RSUP DR. HASAN SADIKIN 2018-2022

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Background: Rhabdomyosarcoma (RMS) is a malignant neoplasm of soft tissue that develops from mesenchymal cells of striated muscle. It is estimated to occur in more than 400 cases per year in the United States. It is the most common soft tissue sarcoma in children and adolescents. The most common location is in the head and neck region, although RMS can occur in other soft tissue locations throughout the body. Embryonal rhabdomyosarcoma is the most common type, followed with alveolar, pleomorphic, and spindle cell rhabdomyosarcoma, respectively. **Objective:** This study aims to describe the clinicopathologic features of RMS in Dr. Hasan Sadikin Hospital Bandung (RSHS). **Methods:** This study was conducted descriptively by collecting patient data from the Department of Anatomical Pathology and Radiology of RSHS between January 2018 and December 2022. The RMS diagnosis must be proven histopathologically confirmed with immunohistochemistry, while metastasis states were based on histopathological or radiological results. **Results and Discussion:** Between 2018-2022, there were 43 cases of RMS at RSHS. The average age of the patients was 25.8 years old, with a male to female ratio of 1:1. The primary location of the most tumors came from the head and neck region with 17 cases (39.5%). The histopathological subtypes found were embryonal (N=14; 32.5%), alveolar (N=5; 11.6%), pleomorphic (N=5; 11.6%), spindle cell (N=2; 0.5%), and 17 cases of undetermined RMS (NOS). Of all these types, 12 cases had metastases (27.9%), with the most metastases occurred in the lung (N=5; 41.7%). **Conclusion:** There were 43 cases of RMS in RSHS during 2018-2022. The most common histologic subtype was embryonal rhabdomyosarcoma, with the most common locations arising from the head-neck. Of all these cases, 12 of them experienced metastasis.

Keywords: descriptive, metastasize, rhabdomyosarcoma

A NEGLECTED CASE OF SYNOVIAL SARCOMA IN 25-YEAR-OLD MALE WITH CLINICALLY BENIGN MIMICKING LESION

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Background: Clinically, synovial sarcoma (SS) looks like benign mimicking lesion due to its slow growing, small and circumscribe tumor. SS with aggressive growth may erode or invade adjacent bone. More than half patient are teenagers and young adult. Almost 70% of cases occur in extremity, especially in juxta-articular region. **Case Description:** A 25-year-old young male come with chief complaint a lump on his knee. It started with small lump since he was 21 y.o. Furthermore, his family decide to treat the lesion with traditional treatment for almost 4 years. Unfortunately, the lesion getting bigger in last 6 months and it started disturbing patient daily activities. Then, patient decide to come to hospital and clinician suggest for doing biopsy procedure. The microscopic findings show spindle blue neoplastic cells with staghorn shape vascular pattern, extensive mitosis without any necrotic area in biopsy sample. In addition, immunohistochemistry examination was performed, it consists of TLE1, EMA, BCL2, CD56, NSE which showed positive stain. However, S100, AE1/3, SMA showed negative staining. **Discussion and Conclusion:** Clinical diagnosis is quite challenging and difficult for synovial sarcoma. Since it's a slow growing tumor, clinical diagnosis is directed for benign soft tissue tumour and imaging studies reveal suspicious for villonodular synovitis. However, histopathological findings with immunohistochemistry staining indicates diagnosis for monophasic synovial sarcoma FNLCC grade 3.

Keywords: benign mimicking lesion, synovial sarcoma,

LARGE SIZE TENOSYNOVIAL GIANT CELL TUMOUR, DIFFUSE TYPE: BASED ON CLINICOPATHOLOGICAL AND IMMUNOHISTOCHEMISTRY EVALUATION

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Background: Tenosynovial giant cell tumour are a lesion with synovial differentiation, most often arise from joint synovium, bursae and tendon sheaths. These tumors are divided according to their location (intra-articular or extra-articular) and growth pattern (localized or diffuse), but appear to share a common pathogenesis. **Case Description:** We report here case a man, 50 years old with a lump on left dorsum pedis, mass base on extensor tendon sheath. Patient was not subjected to radiological examination of dorsum pedis. On macroscopic examination, tumor mass appeared white to gray with yellowish and brown areas with a pattern of villi, like a sponge, tissue size 8 x 6 x 4 cm. On microscopic examination, surgical tissue preparations originating from a lump on left dorsum pedis. Found a mass forming, villous structure (papillary), diffuse and infiltrative. Consists of mononuclear cells (small histiocyte-like cells and large epitheloid cells) and osteoclast-like giant cells. Hemosiderin deposits are also found, partially on cell membrane forming a "halo" appearance, pseudosynovial clefts, and pseudoalveolar spaces filled with erythrocytes. Other foci show foamy macrophages and interstitial hemorrhage. CD68 immunohistochemistry showed positive stained results for small histiocyte like cells and osteoclast-like giant cells. **Discussion and Conclusion:** Tenosynovial giant cell tumour, diffuse type most often affects the knee, patients aged 30-50 years, more often found in women and usually more than 5 cm in size. Based on clinical information, macroscopic, microscopic and immunohistochemical examinations were diagnosed as Tenosynovial giant cell tumour, diffuse type.

Keywords: diffuse type, giant cell, tenosynovial, tumour

SCROTAL LEIOMYOMA: A RARE CASE REPORT

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Background: Leiomyoma is benign tumor that originate from smooth muscle cells. Leiomyoma is well known to be the commonest neoplasm arising from the uterus but leiomyoma originating from the scrotum is a rare entity. Originate from the subcutaneous tissue or tunica dartos. **Case Description:** We present a case of scrotal leiomyoma in a 65 years old male who presented with a slowly growing in fifth years ago, firm, 5 cm lump in lower center of scrotum, painfull during one month before admission. Clinically, it was provisionally diagnosed as scrotal soft tissue tumor and was excised. The biopsy specimen showed histopathologically findings consistent with Leiomyoma. There was no cytological atypia or mitosis. The final diagnosis is scrotal leiomyoma. **Discussion and Conclusion:** This scrotal leiomyoma was excised. The patient was kept on follow up and if recurrence is there a thorough, investigation should be carried out to rule out any possibility of malignancy. This case report highlights the clinicopathological characteristics of the scrotal smooth muscle tumors in order to increase our understanding and thus avoid the possibility of erroneous diagnosis and treatment.

Keywords: leiomyoma, rare entity, scrotum

EWING SARCOMA/PRIMITIVE NEUROECTODERMAL TUMOR ON RIGHT ORBITAL: A RARE CASE REPORT

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Background: Ewing Sarcoma (ES)/ Primitive Neuroectodermal Tumor (PNET) is rare and highly malignant small round cell tumour. It most commonly occurs in children and adolescents, classically involving the long bones of the limbs, ribs, pelvis, and soft tissue. This is the first case ES/PNET reported in orbital at Dr. Wahidin Sudirohusodo Hospital Makassar. **Case Description:** A 6-years-old boy presented with lump in the right eye for one month. His right eye swollen and continued to enlarge, blurred vision in the right eye and proptosis. Radiological examination by Multi-Sliced Computed Tomography (MSCT) of the orbital showed proptosis bulbi due to a retrobulbar mass that destroyed the greater wings of the right sphenoid bone, infiltrating the right lateral rectus muscle, suggesting suspicion of extraconal rhabdomyosarcoma. Histopathological examination revealed ES/PNET, with a positive result of CD99 immunohistochemistry staining. **Discussion and Conclusion:** Both ES/PNET are types of malignant tumors that primarily affect bone and soft tissues. In the orbital region, ES/PNET manifesting as unilateral proptosis is rare in children. ES/PNET can also progress rapidly. In this case, the radiological examination suggested rhabdomyosarcoma. The definitive diagnosis of ES/PNET is confirmed through histopathological and immunohistochemistry examinations. Histopathologically, it exhibits the appearance of small round cells, minimal cytoplasm, and perivascular rosettes. Immnunohistochemistry staining showed negative results for LCA, Desmin, S100, Cytokeratin, Chromogranin, whereas CD99 immunoexpression showed positive result. Based on histopathological and immunohistochemical examinations, we conclude this case represents ES/PNET in the orbital.

Keywords: CD99, ewing sarcoma (ES)/primitive neuroectodermal tumor (PNET), orbital, proptosis

CHORDOMA OF THE NASOPHARYNX: A RARE CASE REPORT

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Background: Chordoma is a rare malignant tumor that originates in the remnants of the notochord. Its incidence rate is 0.1 of 100.000 population each year. The nasopharynx is an unusual and rare site for chordoma. When chordoma occurs in nasopharynx, it may mimic another nasopharynx tumors. **Case Description:** A 61 years old male patient is presented with nasal obstruction and congestion for the last 3 years. Physical examination showed a mass in nasal cavity with congested concha bilaterally and left nasal septum deviation. Radiological examination by Multi Sliced Computed Tomography (MSCT) confirmed the presence of a mass in nasopharyngeal region destructing many bones, suggesting Nasopharyngeal Angiofibroma. Histopathological examination revealed a chordoma, with positive results of Cytokeratin and S100 immunohistochemistry staining. **Discussion and Conclusion:** Chordoma is a rare malignant bone tumor arising from primitive notochord remnants of the axial skeleton, with the site of nasopharynx is a rare case. Clinical and radiological examination showed no specific appearance, and can be mistaken for another nasopharyngeal tumors. In this case, radiological examination suggested Nasopharyngeal Angiofibroma. The definitive diagnosis of chordoma of the nasopharynx is confirmed by histopathological and immunohistochemistry examination. Histopathologycally, it showed the physaliphorous cells embedded within myxoid stroma, separated by fibrous septa. Immunohistochemistry staining showed positive result of Cytokeratin and S100. Based on histopathological and immunohistochemical findings, we conclude this case as Chordoma of The Nasopharynx.

Keywords: chordoma, cytokeratin, nasopharynx, S100

MYCETOMA IN SPINE: A RARE CASE REPORT

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Background: Mycetoma is a chronic granulomatous disease that is more common in tropical regions with predominant involvement of lower extremity. Spinal mycetoma presenting as spine problem is rare where mycetoma affects the tissue of spine structure and there may cause spinal compression with neurological manifestation. **Case Description:** A 53-years-old female who presented with chronic progressive low back pain since five years ago and getting worst in the last two weeks, weakness of both lower extremity since one year ago without any skin swelling or discharging sinuses. MRI showing destruction at 5th lumbar vertebral and sacrococcygeus bone and hypointens lesion at spinal canal as level as 2nd lumbar vertebral to sacrum. Patient already underwent debulking accompanied with biopsy procedure then proceed with decompression and posterior stabilization spine surgery. Histopathological examination with Hematoxylin & Eosin (H&E) stain showing many of filament structure in radier compound suspicious of mycetoma. Periodic-Acid-Schiff (PAS) staining is positive with mycetoma structure is found intravascularly. **Discussion and Conclusion:** Spinal involvement of mycetoma is rare. In spinal mycetoma was found on surgery and histopathology. Clinical sign was non-specific and radiological examination concluded as suspect metastatic bone disease. Histopatological examination showing evidence of mycetoma structure intravascularly and positive PAS staining. The histopathological evaluation of mycetoma is a definitive diagnosis to determine the treatment and prognosis in order to minimize complications and recurrence. Based on histopatological and PAS examination, we concluded this case as a mycetoma in spine.

Keywords: filament, mycetoma, PAS, spine

CONGENITAL LIPOBLASTOMA OF THE SCALP

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Background: Lipoblastoma is a rare benign mesenchymal neoplasm that occurs at various sites in infants and children, and 75-90% of cases can occur before the age of 3 years. There are no exact incidence data in Indonesia. **Case Description:** A 6-month-old boy came was complained by his parents with a lump on the back of the head since 2 weeks of age. On physical examination, a lump in the left parietal region was found, 15 cm in greatest dimension, with soft consistency and without tenderness. An open biopsy was performed. Microscopic examination revealed the tumor mass was well demarcated, covered by fibrous connective tissue capsule, lobulated in arrangement separated by fibrovascular connective tissue septa. The tumor consist of proliferation of mature and imature fat cells. Foci of myxoid material with stellate cells scattered between them. **Discussion and Conclusion:** Lipoblastoma is a benign neoplasm of embryonal white fat, which may be localize or diffuse tumour with a tendency for local recurrence if the tumor was incompletely excised. Lipoblastoma characteristically contains fat cells with spectrum of maturation, ranging from primitive stellate to mature adipocytes. It demonstrates low mitotic activity, absence of nuclear atypia, presence of thick-walled vessels, and lobular architecture with sheets of adipocytes separated by fibrovascular septa. The treatment of choice is complete local excision.

Keywords: congenital, lipoblastoma, scalp

CUTANEOUS LEIOMYOMA CASE REPORT

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Background: Cutaneous Leiomyoma (CLM) is a benign skin tumor arising from smooth muscle cells. Clinicopathologic data on cutaneous leiomyoma with specific reference are limited in the latest literature. Cutaneous leiomyoma account for 5% of all leiomyoma sites. Leiomyoma subtypes are also occasionally discussed in the literature. Smooth muscle tumors are mostly benign, although some kinds of cutaneous leiomyoma (piloleiomyoma) may have genetic abnormalities. Histological and clinical characteristics of these malignancies have disagreement as a result. **Case Description:** Male, 34 years old presented with lumps on back and face since 10 years ago. Lump increases in size accompanied by discomfort that is triggered (cold, heat, or tactile). Local examination of thoracal posterior and fasialis shows multiple mass with diameter of 0.1-1 cm, solid firm, irregular border, mobile. Ultrasound and thorax results from the radiology tests showed no abnormalities. Macroscopic examination obtains multiple mass, irregular borders, gray-white color, solid firm consistency. Microscopic examination reveals tumor growth consisting of the proliferation cells with oval to rounded nuclei, spindle-shaped, fine chromatin, and sufficient cytoplasm. Immunohistochemistry showed tumor cell were positive for SMA and Desmin, negative for S100 and CD34 with low Ki67 results (1% proliferation index). **Discussion and Conclusion:** Cutaneous leiomyoma is a rare benign tumor and is difficult to distinguish from malignant tumor types so immunohistochemistry is often used to confirm the diagnosis. One of the trustworthy variables to identify a benign or malignant tumor is patient follow-up.

Keywords: cutaneous leiomyoma, fasialis, piloleiomyoma, thoracal posterior

SUBCUTANEOUS GRANULAR CELL TUMOUR OF THE LEFT CRURIS REGION: A CASE REPORT

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Background: Granular cell tumor is uncommon soft tissue tumor that showing neuroectodermal differentiation, mostly benign. Prof. dr. I. G. N. G. Ngoerah Hospital, only one case was recorded in recent 5 year, so this case was presented to be a case report. **Case Description:** A 35-year-old woman presented with a painless lump in the left cruris for 4 years. MRI showed a low grade subcutis soft tissue mass in the left cruris region. Resection specimen revealed solid mass, 3.5x3.5x1.5 cm in size. Microscopically the tumor cells were arranged in sheets, nests, and cord patterns of epithelioid to polygonal cells, eosinophilic granular cytoplasm, ovoid-spindle round nuclei, hyperchromatic to vesicular with distinct nucleoli. Mitosis 2/10 HPF. No visible area of necrosis. On immunohistochemistry examination, the tumor cells were stained positive for S100 and NSE, and negative for Desmin, Chromogranin A, Synaptophysin, HMB45, and CD 99. The diagnosis was Granular Cell Tumor. **Discussion and Conclusion:** Granular cell tumour is a tumour showing neuroectodermal differentiation, composed of epithelioid to polygonal cell with abundant eosinophilic, granular cytoplasm; mostly are benign. Most cases affect deep dermis and subcutaneous tissue. Malignant granular cell tumours have characteristics including increased cellularity, high grade nuclei, necrosis and/or increased mitotic activity. Wide local surgical excision is the choice of theraphy for GCT. Based on clinical presentation, imaging, morphology and immunohistochemistry, this case confirmed as Granular cell tumor, with a favorable prognosis.

Keywords: Abrikossoff tumor, cruris tumor, granular cell tumor, left cruris, soft tissue, subcutis

EXTRASKELETAL ATYPICAL EWING SARCOMA IN THE PARIETOOCCIPITAL REGION – A CHALLENGING AND RARE CASE

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Background: Extraskeletal Ewing Sarcoma (ES) is relatively a rare occurrence, about 12% of patients, with a wide anatomical distribution. Atypical ES has unusual clinical and morphologic features, i.e. larger tumour cells with prominent nucleoli and irregular contours, lead to challenging diagnosis. **Case Description:** A 38-year-old male had a 3 cm bump on his head after trauma 5 years ago. The tumour got bigger over time. The latest head CT scan showed inhomogeneous lobulated solid mass, 12 cm in diameter, located on the right parietooccipital soft tissue with a necrotic area, irregular borders, and inhomogeneous enhancement after contrast-injection, no bone infiltration. The surgeon did a wide excision and frozen section. **Discussion and Conclusion:** The frozen section specimen was 850 cc tissue pieces that microscopically showed group of cells infiltrated to the stroma with round, oval to elongated nuclei, moderately pleomorphic, hyperchromatic to vesicular, nuclear grooves, intranuclear inclusions, conspicuous nucleoli, amphophilic cytoplasm, overlapping, suggestive of malignant tumour with unknown differentiation. The histopathological examination showed similar lesions in the deep dermis. Immunohistochemistry examinations were negative for CD45, Cytokeratin AE1/AE3, p40, CD34, Desmin, S100, SMA, STAT6, EMA, CK19, HMWCK, but positive for vimentin and CD99. Positive NKX2-2 and FLI1 immunostaining would support the diagnosis, while the confirmation required genetic testing, especially FET-ETS fusion detection, as we still can't exclude other Ewing-like Sarcomas. The final diagnosis based on morphology and immunohistochemistry was Extraskeletal Atypical ES.

Keywords: atypical ewing sarcoma, extraskeletal ewing sarcoma

HIGH GRADE MYXOFIBROSARCOMA OF HUMERUS : A CASE REPORT

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Background: Myxofibrosarcoma is a rare tumor with an incidence of about 5% of all sarcomas in soft tissues. Cases of myxofibrosarcoma often occur at an advanced age and are slightly more common in males than females. Tumors are more common in the lower extremities than the upper extremities. **Case Description:** Male patient aged 69 years, complained of a lump on the left arm that was felt since 1 year ago. Humerus MRI examination revealed a lobulated solid mass in the proximal - distal sinistra humerus region, suggesting a malignant primary soft tissue mass. Macroscopic examination revealed a lobulated, gray-white to gelatinous mass. Microscopic examination found a partially infiltrative tumor mass at the edge, lobulated composed of neoplastic cells mostly immersed in a myxoid matrix. Tumor cells show spindle morphology, partly oval round, cytoplasm varies eosinophilic, heavy nuclear pleomorphia, hyperchromatic nuclei, between tumor cells appear thin - walled vessels (curvilinear) mitosis is easily found. High mitosis. Immunohistochemical examination showed positive expression for CD 34, positive focal expression for SMA and negative expression of S100. **Discussion and Conclusion:** Myxofibrosarcoma is a malignant fibroblastic neoplasm characterized by cellular pleomorphism, variably prominent myxoid stroma, and prominent elongated, thin walled stromal blood vessels. Immunohistochemical examination showed focal positive CD 34 and SMA, diffuse positive CD 34 expression occurred in superficial tumors. Based on histopathology and immunohistochemistry examination, the case was concluded to be high grade myxofibrosarcoma.

Keywords: high grade, humerus, myxofibrosarcoma, soft tissue

MALIGNANT GLOMUS TUMOR: A RARE CASE

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Background: Glomus tumors are rare cases of mesenchymal neoplasms, accounting for 2% of all soft tissue tumors. Glomus tumors arise from the Sucquet-Hoyer canal of the normal glomus body, an arteriovenous anastomosis that specifically regulates heat in the skin. A vast majority of glomus tumors are benign with less than 1% demonstrating malignant glomus tumors. The most common site is the distal extremity, particularly subungual region areas. **Case Description:** A 68 years old male patient who complained of nodular lesion painful in the thumbs left hand since 1 year ago. An amputation of the thumb tissue was performed with macroscopic examination of a brownish-white solid mass with diameter of 3 cm. Microscopic examination revealed proliferation of cells with round to oval and spindle nuclei, partially hyperchromatic, partially vesicular, coarse chromatin, marked nucleoli, atypical mitoses >5/10 HPF. These cells grow infiltrating in the stroma form solid stuctures, fasciculus and surround the blood vessels. Elsewhere, there are foci of uniform, rounded cell sheets and hyperchromatic nuclei. **Discussion and Conclusion:** Malignant glomus tumors are defined as those that have marked nuclear atypia and elevated mitotic rates (> 5 mitoses/50 HPF) or atypical mitotic figures. In this case the finding of a benign glomus component helped to establish a histopathological diagnosis of malignant glomus tumor.

Keywords: distal extremity, histopathology, malignant glomus tumor, rare mesenchymal neoplasms

OSTEOLIPOMA OF THE DISTAL RIGHT FEMUR IN 54 YEARS OLD FEMALE WHICH CLINICORADIOLOGICALLY DIAGNOSE AS MALIGNANT SOFT TISSUE TUMOR

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Background: Osteolipoma is a rare variant of lipoma consisting of mature adipose tissue and mature lamellar bone. While superficial fatty tumors are almost benign, deep lipomatous neoplasms are more difficult to differentiate whether it is malignant or not radiologically and microscopically. They occur generally in patients over fourth decade, but the exact incidence is unknown. **Case Description:** We reported a rare case from 54-years-old female with chief complaint of painful palpable mass on the right thigh that growing bigger since last year. Physical examination revealed mobile, firm, solid, and tenderness mass. Laboratory findings were normal except for raised erythrocytes sedimentation rate (32 mm/hour). Radiographs revealed a heterogenous malignant mass with fat, calcification, haemorrhagic components on distal right femur in the region of the suprapatellar without evidence of osseus involvement. FNAB smears consisted of tumor cells with calcification. Histopathological examination revealed proliferation of well-circumscribed of uniform mature adipocytes that embedded in trabecular lamellar-type bone. **Discussion and Conclusion:** Osteolipoma is the rarest subtype of lipoma, that originally from deep soft tissue and subcutaneous plane. They have been found at various sites, however rarely in distal femur and knee region. Although osteolipoma difficult to diagnose radiologically, definitive diagnose can easily be done with biopsy. Microscopically consists of mature adipose tissue with multifocal areas of bone tissue confirmed the diagnosis. Osteolipoma has same prognosis as simple lipoma and surgical excision is recommended treatment. No recurrences have been reported. To summarize, although very rare, when a lesion with adipose tissue in combination with ossification is encountered, osteolipoma should be considered.

Keywords: distal and femur, old female, osteolipoma

CASE REPORT: EWING SARCOMA AT LEFT ILIAC WING

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Background: Ewing sarcoma is the second most common malignant bone tumor in children after osteosarcoma. Since the development of modern chemotherapy, the prognosis has improved. Therefore, pathology confirmation of cases with atypical clinical and radiological findings are necessary for better treatment. **Case Description:** A 6-year-old boy came to hospital with a proggresively enlarged lump at the left groin suffered since 4 month. The lump accompanied by pain that getting worse at night. A pelvic X-ray demonstrated multiple lytic lesions, permeative sclerosis, and lamellated periosteal reaction at left iliac wing. A subsequent MRI revealed destructive sunburst periosteal reaction of cortex extending to the adjacent muscles, suggestive osteosarcoma. Histopathologically, solid diffuse nest of highly mitotic round cells with pleomorphic hyperchromatic ovoid nuclei and conspicuous nucleoli were identified. Immunohistochemistry revealed positive membranous staining for CD99 and Vimentin. LCA and SATB2 were negative. **Discussion and Conclusion:** Sometimes Ewing Sarcoma is difficult to distinguish from osteosarcoma clinically and radiologically. In such case, pathological examination is the only modality in establishing the diagnosis. The biopsy sample that we accepted was a small tissue consisting only of a sheet of round cells with prominent nucleoli and highly mitotic rate. The pattern of homer-wright pseudorossetes and osteoid matrix are hardly identified. Negative staining of SATB2 and LCA, and highly expression of CD99 confirmed that the tumor cells were neither osteosarcoma nor malignant lymphoma. Based on histopathological and immunohistochemical findings, we conclude this case as an Ewing Sarcoma.

Keywords: CD99, ewing sarcoma, Homer-Wright Pseudorossette, osteosarcoma, SATB2

EMBRYONAL RHABDOMYOSARCOMA PRESENTING AS HEMANGIOMA CLINICALLY IN INFANTS

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Background: Embryonal rhabdomyosarcoma is the most common type of rhabdomyosarcoma that affects children. Approximately 28% of incident rhabdomyosarcomas occur in the head and neck region. The treatment response and prognosis of this disease are highly dependent on the location and histopathological diagnosis. **Case Description:** A 7-month-old toddler has a bluish-red lump on the lower lip that is getting bigger within 3 months. Five months later, a bluish-red lump appeared on the right neck, with firm boundaries. The results of the MSCT examination showed a mass in the labium oris inferior, buccal to the right submandible leading to a hemangioma. The patient was treated with hemangioma management but did not respond. The CPC decided to do a biopsy. Histopathological examination showed fragments of connective tissue with cellular tumors arranged in a rosette between fibromyxoid connective tissue and proliferating blood vessels. Immunohistochemical examination showed positive Desmyn and Myogenin stains, CD31 and ERG negative stains rule out the diagnosis of vascular tumors. **Discussion and Conclusion:** Embryonal rhabdomyosarcoma in the head and neck area can have a clinical picture resembling a hemangioma. The diagnosis is confirmed by histopathology and immunohistochemistry. It is necessary to be aware of the diagnosis of rhabdomyosarcoma in the clinical and radiological presentation of a progressive hemangioma. In this case, multidisciplinary care between clinical symptoms and supporting examinations is needed so that the patient gets the right management for therapy.

Keywords: CPC, diagnosis, embryonal rhabdomyosarcoma, hemangioma

SECONDARY PERIPHERAL CHONDROSARCOMA AT ILIAC WING, CASE REPORT

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Background: Secondary peripheral chondrosarcoma grade 2, is a moderate-grade malignant cartilage matrix-producing tumor that arises from the surface of the bone in an already-existing osteochondroma. Only 1% of all occurrences of bone cancers are secondary chondrosarcomas. **Case Description:** A 30 year old man with complaints of a lump in his right hip. The lump was felt within 7 months and getting bigger and more painful. Previously, the right hip was hit by an iron, then massaged. In 2019, the patient complained of a lump on the right hip, then surgery was performed at Lumajang Hospital and the patient's specimen were sent to the Anatomic Pathology laboratory Dr. Soetomo General Hospital to get a second opinion. Radiological examination showed a multilobulated recurrent mass, with necrotic components and fat inside, with clear irregular borders. The tumor was finally excised and the specimen was sent to the Anatomical Pathology laboratory Dr. Soetomo General Hospital, for histopathological examination. Microscopic examination, tumor tissue was found arranged in lobules separated by fibrous connective tissue septa. The tumor consists of proliferating anaplastic chondroblast cells with oval to spindle nuclei, pleomorphic, hyperchromatic, some of binuclei, narrow to moderate cytoplasm, some cells are located in the lacunae between the chondroid matrix. Mitosis 16/10 HPF. Areas of necrosis are seen. On the tumor stalk, endochondral ossification is seen. **Discussion and Conclusion:** Secondary peripheral chondrosarcoma grade 2 is a rare malignant cartilage tumor. Holistic examination in the form of clinical, radiological, and histopathological confirmation can establish cases of secondary peripheral chondrosarcoma.

Keywords: iliac wing, malignant cartilaginous neoplasm, secondary peripheral chondrosarcoma

CASE SERIES: HISTOPATHOLOGY OF OSTEOSARCOMA IN ADULT AND ADOLESCENCE

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Background: Histopathological diagnosis plays a crucial role in the accurate classification and management of osteosarcoma. Epidemiologically, this tumor often occurs at a adolescents and young adults. **Case Description:** This case features two cases of osteosarcoma in adolescents and adult. The first case involves a 44-year-old female presenting with persistent left knee pain and limited mobility. Biopsy confirmed the diagnosis of osteosarcoma. Radiological results showed a cystic lesion. The second case revolves around a 17-year-old male who presented with an enlarging painful mass in the distal femur. Radiological evaluations revealed an osteoblastic lesion in the proximal tibia. **Discussion and Conclusion:** The present case series delves into the histopathological aspects of osteosarcoma in both adult and adolescent patients. This case series underscores the critical role of histopathological examination in the diagnosis and classification of osteosarcoma in both adult and adolescent patients. The diversity in histological subtypes and cellular characteristics reflects the intricate nature of this malignancy. Histopathological examination revealed the hallmark feature of osteosarcoma, the presence of malignant cells producing osteoid, the unmineralized bone matrix. This osteoid production was evident in all cases, confirming the diagnosis. Collaboration among pathologists, oncologists, and orthopedic surgeons is vital for accurate diagnosis and comprehensive patient care.

Keywords: age, fibroblastic osteosarcoma, osteosarcoma, osteoid

EPITHELIOID HEMANGIOENDOTHELIOMA: A VASCULAR MALIGNANT TUMOR THAT MIMICS CARCINOMA

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Background: Epithelioid hemangioendothelioma is a malignant vascular neoplasm composed of epithelioid endothelial cells in a typical myxohyaline stroma. This tumor is characterized by endothelial cells that resemble epithelial ("epithelioid") cells. The epithelioid cells solid growth pattern and features often mimic those of carcinoma. **Case Description:** A case of a 59-year-old man with a mass in the submandibular region is reported. A biopsy was performed with a histopathological appearance consisting of round or slightly spindle-shaped eosinophilic endothelial cells with round nuclei and vacuolization in the cytoplasm. Tumor cells were clustered in nests. Immunohistochemistry was performed with CD34+, CD31+, CK-, and Ki67+ results, concluding epithelioid hemangioendothelioma. The patient was planned for mass excision surgery after CT Angiography and colli Ultrasound. **Discussion and Conclusion:** In this case, the histopathological findings showed solid epithelioid cells clustered into a nested structure, with pleomorphic nuclei, partially prominent nucleoli, vacuolization of the cytoplasm, and no apparent formation of vascular gaps, leading to the diagnosis of carcinoma. The tumor can be distinguished from carcinoma by the lack of atypia and mitotic activity and the presence of vascular structures in some sections. Tumor cells express endothelial markers CD34, CD31, and Ki67. This patient did not express CK marker, so this case is Epithelioid hemangioendothelioma.

Keywords: epithelioid hemangioendothelioma, immunohistochemistry, mimicking carcinoma, vascular tumors

CELULAR ANGIOFIBROMA OF THE NASOPHARYNX

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Background: Cellular angiofibroma is a rare, cellular benign tumor and a blood vessel-rich fibroblastic tumor derived from superficial soft tissue. These tumors often occur in the distal parts of the female and male reproductive systems in the vulvar, vagina, inguinal area, scrotum and in various other superficial soft tissue areas throughout the body. **Case Description:** 33-year-old male complained of nosebleeds since 3 days before admission to the hospital, frequency of nosebleeds 2 spoons per day, accompanied by nasal congestion. CT angiography images appear masses in the maxillary area of sinistra, cavum nasi sinistra, part of nasopharynx sinistra with arterial feeding of the carotid artery externa. On histopathological examination, it appears that the tumor mass consists of stromal and vascular cells. The stromal component with spindle cells is arranged intersecting fascicle, fusiform nucleus, narrow pale cytoplasm and vascular component in the form of proliferation of blood vessels with thickened walls, hyalinization. Immunoreactive against CD34, SMA, PR and negative in desmin, ER. **Discussion and Conclusion:** Celluler angiofibroma tumors are usually asymptomatic. High radiological features of vascular and morphological spindle cells with medium to high cellularity arranged intersecting fascicles, surrounding a prominent vascular structure. CD34 immunohistochemistry is strongly positive in 60% of cases, SMA and desmin in 10-20% of cases. ER and PR are positively expressed in more than 50% of cases, women are more often expressed than men. In these cases clinical symptoms, radiological, histopathological and immunohistochemical features can determine the diagnosis.

Keywords: cellular angiofibroma of the nasopharynx

LANGERHANS CELL HISTIOCYTOSIS: A RARE CASE OF BENIGN TUMOR OF THE BONE

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Background: Langerhans cell histiocytosis (LCH) is a relatively rare disorder so that the diagnosis of LCH is often missed. Langerhans cell histiocytosis describes a proliferation disorder involving dendritic cells. The spectrum of disorders ranges from benign cell proliferation to malignant tumors. Incidence is frequent in children and young adults. The ratio of males and females is 2: 1. Single sytem often appears in the skull, femur, spine, pelvis, ribs and mandible. Multi system often involves skin, bones, liver, spleen and bone marrow. **Case Description:** 4 year old boy was brought to the hospital with complaints of 2 lumps on his head the size of quail eggs, felt rubbery, grew slowly since 2 months before entering the hospital. Head CT scan with contrast showed multiple SOL, right and left Os Parietal bone destruction. The results of the operation showed a reddish soft mass, destruction of the cranial bones, mobile in the area of the intact duramater. Macroscopically the blackish brown mass measures 3.5x3x1 cm. Microscopically the tumor cells are arranged like sheets, round-oval cells, irregular nuclei, vesicular, grooved nuclei, pale cytoplasm, nucleoli present. CD 1a and S100 protein immunohistochemistry was positive. **Discussion and Conclusion:** Langerhans cell histiocytosis (LCH) is a haematopoietic neoplasm of bone. The cause is still unclear whether malignancy or dysregulation of the immune system. Therefore, the diagnosis of LCH requires special attention.

Keywords: children, langerhans cell histiocytosis, rare disorder

INTRACRANIAL SUPRASELLAR GIANT CELL TUMOR: A RARE CASE REPORT

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Background: Giant cell tumors (GCT) of the bone are rare, usually benign, but locally aggressive neoplasms that primarily occur in the epiphyses of long bones. They rarely occur in the pelvis, spine, or skull, with only one reported case in the intracranial region. The case of primary GCT in the suprasellar area is reported here for the first time. **Case Description:** A 30-year-old man complained of blurred vision and pain in his right and left eyes. He had no floaters or eye redness and did not have recent trauma. The ophthalmologist's examination showed normal results. The patient underwent a multi-slice computed tomography (MSCT) scan which revealed a 4.5 x 5.4 x 3.7 cm mass located at the suprasellar region and extending to the right temporalis, sella turcica, and intraconal cavity of the right orbit, indicating the presence of a malignant tumor. Due to the inoperable mass, a craniopharyngeal biopsy was performed, and histopathological examination showed multinucleated osteoclastic giant cells admixed with round and spindle mononuclear cells. The immunostaining result showed positive staining of CD68 and p63; meanwhile, GFAP was negative, confirming the diagnosis of GCT. **Discussion and Conclusion:** GCT rarely develops intracranially, with the sphenoid and temporal bones being the most commonly affected cranial bones. Complete surgical removal is the preferred management, but in some cases, radiotherapy may be effective for local tumor control. Despite undergoing 34 radiotherapy sessions, this patient did not experience significant clinical improvements.

Keywords: giant cell tumor, GCT, intracranial GCT, suprasellar

CASE REPORT: RECURENT A RARE SUPERFICIAL FRONTAL LYMPHANGIOMA IN CHILDHOLD

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Background: Lymphangioma is a benign lymph vessels tumor, which ussually found in conggenital or chillhood. Rarely, frontal superficial lymphangioma subtype appears in the frontal area of the face which contain of microcystic component, and located in the dermis and subcutaneous tissues. It recurs less often than cavernous lymphangioma, which usually affects muscles and tendons. This case had recurrence of frontal lymphangiomas. **Case Description:** Female toddler, 2 years and 6 months old, with a frontal cranial tumor. The tumor has an indistinct border, a 5-centimeter diameter, and is additionally pressed on the right maxillary sinus roof and inferolateral ocular bulb. MRI: tumor infiltrated the right medial rectus muscle and post-septal ocular bulb. The macroscopic examination of the tumor revealed multicystic tissue of various diameters. Microscopic findings of indistinct borders of the tumor consist of macrocystic and microcystic vessels that infiltrate the muscle layer and a focal lymphocytic infiltrate. **Discussion and Conclusion:** The overall prognosis of neonatal macrocystic and microcystic lymphangiomas is more unfavorable compared to general lymphangiomas. This is primarily attributed to several factors, including the neonatal age of the patients, the presence of a macrocystic component, the unclear demarcation of borders with infiltration into deeper tissues and the muscle layer, and a history of recurrent episodes. This case must be differentiated from another vascular neoplasm, such as a hemangioma. The recurrence rate of lymphangiomas following postoperative treatment indicates the necessity for more advanced treatment strategies.

Keywords: children, frontal lymphangioma, recurrences

CARDIAC LEIOMYOSARCOMA

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Background: Cardiac leiomyosarcoma is a very rare case of cardiac malignancy, with a frequency of 0.02%, with non-specific symptoms and has poor prognosis. **Case Description:** A 59-year-old woman, complaining of left chest and back pain for one year, regularly goes to the Rheumathology clinic. Fibrinogen serum 640mg/dL. BMD result is severe osteoporosis. Echocardiografi shows Left Atrium (LA) myxoma. Bone survey show multiple bone metastasis. Debulking resection by thoracotomy found lesion fulfilling LA, adhesion on mitral valve, fleshy, grey to tan mass, size 3x2x1 cm. Histopathology: The cells are set in long fascicles, intersecting fascicles, spindle-shaped cells with plump, blunt-ended nuclei, pleomorphic, clumped chromatin, perinucler vacuoles, eosinophilic cytoplasm, hyalinized stroma, necrosis, mitoses 14/10hpf, with generally diffuse reactive with SMA, Caldesmon, MDM2 antibody, and Ki67 50%, consistent with Cardiac leiomiosarcoma with MDM2 aberrant expression on LA, stadium IV, T1N0M1. The patient refused chemoradiation and died after 18 weeks post-operative. **Discussion and Conclusion:** Cardiac tumor generally presents nonspecific symptoms, dispneu, chest discomfort, hemoptysis, and atrial fibrillation. The majority of leiomyosarcoma are high-grade, >70% cases are positive >1 myogenic markers (SMA, desmin, h-caldesmon). Undifferentiated pleomorphic sarcoma usually express MDM2, associated with chemoresistance through the p53-MDM2 loop-dependent and p53-MDM2 loop-independent. Local recurrence and bone metastasis are frequently reported, despite complete resection. An elderly woman, with osteoporosis, persistent left chest and back pain, echocardiografi showed an LA mass, suggestive of metastatic cardiac malignancy to the bone. A comprehensive examination was performed to establish cardiac leiomyosarcoma quickly and accurately, due to the high morbidity and mortality rates. The poor prognosis related to inadequate margin and high-grade morphology.

Keywords: cardiac leiomyosarcoma, MDM2, metastasis

PULMONARY CRYPTOCOCCOSIS

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Background: Pulmonary cryptococcosis is a rare lung infection, caused by *basidiomycetous* yeast, *Cryptococcosis* species. This case is very rare, the incidence rate is 0.2%, symptoms resemble lung tumors, have a poor prognosis. **Case Description:** 62 years old woman with severe headache and fever, sometimes coughing. CT scan of thorax shows a hyperdense lesion on the posterobasal segment of the left lung and CT scan of head shows a posterior fossa subdural hygroma around the cerebellum. Left lung TTNA cytology found groups of monolayer cells like honeycomb, firm cell membrane, concentric center, thin wall, eosinophilic double contour, surrounded by a clear halo. Histopathology found that most of the lung alveoli were dilated, destroyed and coagulative necrosis, alveoli sacs filled with macrophage cells, lymphocytes, plasma, many fungal spores were found round oval shape with thin walls, double contour, eosinophilic and budding. Positive histochemistry on spore and mushroom budding with GMS, mucicarmine, alcian blue, PAS, fontana masson stains. It was concluded that pulmonary cryptococcosis, the patient died 7 weeks post-surgery. **Discussion and Conclusion:** Pulmonary cryptococcosis gave positive histochemical results on spores and budding with GMS, mucicarmine, alcian blue, PAS, fontana masson stains. *Cryptococci* morphology refractile spherical shape, spherical, eosinophilic, non-nucleated, thin-walled, yeast shape oval to elliptical, 2-20 µm in diameter, surrounded by a wide clear halo, single bud form attached to mother cell with narrow neck. However, it can have similarities with the morphology of blastomycosis, distinguished by negative results on examination of mucicarmine, GMS, fontana masson. A 62-year-old woman with severe headache, looks like a mass resembling a left lung tumor, CT scan of thorax shows a left lung posterobasal mass. The results of TTNA cytology, histopathology and histochemical smears showed Pulmonary cryptococcosis infection.

Keywords: cryptococcosis, fofana masson, GMS, mucicarmine, pulmonary

CARDIAC MYXOMA, A RARE CASE SERIES FROM 53 YEAR OLD WOMAN AND 60 YEAR OLD MAN

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Background: Cardiac myxoma is a rare disease with prevalence of cardiac myxoma ranges from 0.001 to 0.03% in the general population. The unusual feature of cardiac myxoma is its biological potential to embolise and grow at the site of embolization, causing organ infarction. For that reason, timely diagnosis and treatment are essential for the prevention of sometimes life-threatening complications. **Case Description:** We reported two rare cases of cardiac myxoma from 53 year old woman and 60 year old man with dyspneu as chief complaint. Both cases involved left atrial and diagnosed by echocardiograph and histopathological examination. Radiological and echocardiographic examination on both cases showed cardiomegaly and left atrial myxoma. The laboratory findings revealed slight elevation of leucocyte and decrease in haemoglobin and platelet. Histopathological examination of both cases revealed myoma cells proliferation within myxoid stroma. **Discussion and Conclusion:** Cardiac myxoma is rarely encountered in daily practice, but it is the most common cardiac tumour with majority located in left atrial. It occurs in all age group but most common between fourth and seventh decade of life. Clinical presentation of cardiac myxoma varies and depend on tumour location, size, shape, mobility, and rate of growth. Microscopic evaluation of resected mass consist of stellate cells with eosinophilic cytoplasm and round to oval nuclei within myxoid stroma. There are currently no effective medical therapeutic to inhibit tumor growth and surgical resection is the mainstay of treatment, which prevents a dreaded complication resulted from systemic and pulmonary embolisms.

Keywords : cardiac myxoma, cardiac tumour, case series, histopathology

PRIMARY MEDIASTINAL NONSEMINOMATOUS GERM CELL TUMORS (PMNSGCTS): THE UTILITY OF TRANSTHORACIC ULTRASOUND-GUIDED NEEDLE ASPIRATION BIOPSY RAPID ON-SITE EXAMINATION (ROSE) SUBSEQUENT BY CORE BIOPSY

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Background: Primary nonseminomatous germ cell tumors are challenging to diagnose due to diverse histological subtypes and are extremely rare. The management of this tumor necessitates a multidisciplinary approach involving oncologists, radiologists, and pathologists. A rapid on-site examination is one of the useful procedures in inoperable tumours. **Case Description:** We present a primary mixed yolk sac tumor and choriocarcinoma case in a 25-year-old male. The patient present with progressive chest pain, cough, and dyspnea. Imaging examination revealed a large heterogeneous mediastinal mass compressing adjacent structures. Transthoracic Ultrasound Guided Needle Aspiration Biopsy Rapid On-Site Examination subsequent by core biopsy was performed. Cytological and histopathological examination showed a mixed germ cell tumor consisting of yolk sac tumor and choriocarcinoma components. Patient has an increased serum level for alpha-fetoprotein (AFP) and beta-human chorionic gonadotropin (β-hCG), supporting the diagnosis. **Discussion and Conclusion:** Primary mediastinal nonseminomatous germ cell tumors have a variety of histological subtypes and clinical presentations in late stages. Rapid on-site examination followed by core biopsy is one of the most useful procedures for diagnosing this tumor.

Keywords: choriocarcinoma, germ cell tumor, mediastinum, rapid on-site examination, yolk sac tumor, young male

PULMONARY ASPERGILLOMA IN POST-PULMONARY TUBERCULOSIS PATIENT: A CASE REPORT

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Background: Pulmonary aspergilloma is a fungal infection caused by *Aspergillus Sp* which grows in pre-existing lung cavities and called fungus ball. An existing cavity resulting from some conditions such as post-tuberculosis infection, bronchiectasis, abscess and emphysema. Pulmonary tuberculosis is a risk factor in pulmonary aspergilloma. In 2019 there were 845000 cases of pulmonary tuberculosis in Indonesia. Based on this condition, cases of pulmonary aspergilloma might be increased. **Case Description:** A fourthy-one-year-old woman came to Goenawan Partowidigdo Pulmonary Hospital on 4th April 2023 with a chief complaint was hemoptysis, with clinical history pulmonary tuberculosis. She had been treated for 6 months. Physical examination in normal condition. Laboratory examination,presents leucocytosis and increasing titer of HbA1c. Sputum examination shows no hyphae or spores. Chest X-ray found infiltrate in suprahillar of left lung. April 11th 2023 she took a thoracotomy for diagnostic and treatment. The thoracic surgeon found a fungus ball in her lung. The speciments had been sent to the Anatomy Patology Laboratory. Macroscopic examination shows brownie, friable fungus ball sized 4x1.5 cm. Microscopically found septate, branching and angulated hyphae without invasion into lung tissue. Based on those examinations the diagnosis was pulmonary aspergilloma and diabetic mellitus type 2. She took fluconazole 1x200 mg and novomix 2x12iu for medicine and patient's condition was getting better. **Discussion and Conclusion:** Pulmonary tuberculosis is a fungal infection caused by Aspergillus Sp. This condition could happen with a clinical history of tuberculosis and pre-existing lung cavities. The histopathologic examination is one of the modalities to diagnose pulmonary aspergilloma, by finding septated, branching and angulated hyphae without invasion into lung tissue.

Keywords: histopathologic examination, pulmonary tuberculosis, post-pulmonary tuberculosis

THYMIC CARCINOMA WITH ADENOID CYSTIC CARCINOMA LIKE FEATURES

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Background: Thymic adenocarcinoma is a rare subtype of thymic carcinoma, accounting only 0.48% of all cases thymic epithelial tumors. Thymic carcinoma with adenoid cystic carcinoma-like features is a rare variant of thymic adenocarcinoma. **Case Description:** 61 year old man, complained of right chest pain accompanied by a lump for 5 months before admitted the hospital, the lump is growing up, weight loss, Family history of tumor denied, cured of pulmonary TB with OAT treatment for 6 months in 2008. Palpable hard mass in the thoracic region, MSCT thorax showed an inferior mediastinal mass (6.3x4.1x7.7cm) which extended to the subcarinal. Macroscopic: a mass measuring 8x6x3 cm, on solid sections partially microcystic, brownish white, chewy. Histopathology: tumor forming cribriform structures, solid, consisting of round - oval cells, pleomorphic nuclei, some with nuclear groove-like, eosinophilic cytoplasm, partially vacuolated, mitotic atypia 18/10HPF. Stromal fibrosis, desmoplastic, necrosis. Immunoreactive against P63, AE1/AE3, S100, CD5, BCL2, Ki67 40%, negative towards TTF1, CD117, SMA, synaptophysin and chromogranin. Concluded thymic carcinoma with adenoid cystic carcinoma like features in the mediastinum. **Discussion and Conclusion:** Thymic carcinoma is usually asymptomatic sometimes local pain, The morphology arranged cribriform, Microcyst contains mucoid matrix formed by 2 rows of cells, without intracellular mucin. Mild-moderate nuclear atypia. Necrosis and vascular invasion are occasionally encountered. Immunoreactive on cytokeratin, pancytokeratin, P63, CD56 and the S100 is scattered, negative for SMA, CD117 and neuroendocrine markers. Primary malignancy of the lung is excluded by immunohistochemistry. Comprehensive diagnosis required to establish thymic carcinoma with adenoid cystic carcinoma.

Keywords: mediastinum, thymic carcinoma with adenoid cystic carcinoma like features (TCACC), thymic adenocarcinoma

UNRAVELING THE DIAGNOSTIC ENIGMA OF MEDIASTINAL TUBERCULOSIS COEXISTING WITH DIFFUSE LARGE B-CELL LYMPHOMA: MULTI-MODALITY DIAGNOSTIC APPROACH

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Background: Mediastinal lesions, with their diverse presentations, pose intricate diagnostic challenges due to overlapping clinical and radiological features, particularly when tuberculosis (TB) co-existed with neoplasms. The Computed Tomography (CT)-guided Transthoracic Needle Aspiration (TTNA), assisted with Rapid On-Site Evaluation (ROSE), is arguably cost-effective and sensitive method, as it provides immediate intraprocedural feedback for the clinician. However, this method has limitations in heterogenous lesions; its ambiguities can lead to misdiagnoses, adversely affecting patient prognosis and potentially worsening disease progression. **Case Report:** A 26-year-old male with weight loss, cough, dyspnea, and a history of TB exposure exhibited radiological signs indicative of TB, yet also suggestive of thymoma and lymphoma. Subsequent tests, including CT-guided TTNA, Ethambutol sensitivity and Polymerase Chain Reaction (PCR), confirmed TB. Nonetheless, despite standard treatment and initial clinical improvement, a growing mediastinal mass was detected. Post-resection histopathology revealed large tumor cells with Langhans-type giant cells. Immunohistochemistry identified these cells as predominantly CD20 positive, leading to a diagnosis of Diffuse Large B-cell Lymphoma co-infected with TB. **Discussion and Conclusion:** This case highlights the diagnostic challenges presented by such complexities. The inconsistency encountered here emphasizes the need for a more comprehensive approach. Importantly, it underscores the potentially critical role of multiple-site biopsies for lesions with incongruent interdisciplinary findings. A multi-modal diagnostic strategy, integrated advanced imaging, molecular, and immunohistochemistry tests, is essential for accurate diagnosis and appropriate treatment.

Keywords: computed tomography-guided transthoracic needle aspiration, lymphoma co-infected with tuberculosis, mediastinal lesion, rapid on-site evaluation

HISTOPATHOLOGICAL FEATURES OF PRIMARY PROSTATE TUMORS AT DR. HASAN SADIKIN CENTRAL GENERAL HOSPITAL BANDUNG IN 2018-2022

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Background: Primary prostate tumors can be divided into benign and malignant. Most primary prostate tumors mainly consist of prostatic hyperplasia for benign lesions and prostate adenocarcinoma for malignant lesions. The clinical and histopathological features of both are sometimes difficult to distinguish. Adenocarcinoma of the prostate is the fourth most common cancer and the eighth cancer that causes death in the world. **Objective:** This study aims to determine the histopathological features in cases of primary prostate tumors at Dr. Hasan Sadikin Hospital from 1 January 2018 to 31 December 2022. **Methods:** This study is a retrospective descriptive study. Patients data collected from the hospital information system, which was diagnosed as primary prostate tumor. **Results and Discussion:** The total number of primary prostate tumors was 464, with histopathological diagnoses consisting of prostatic hyperplasia in 349 cases (75.21%) and prostate adenocarcinoma in 115 cases (24.78%). The mean age for prostatic hyperplasia was 67.59 (SD: 7.89), and the mean age for prostate adenocarcinoma was 69.71 (SD: 9.45). Gleason Score 9 (n = 50; 43.48%) was the highest number of prostate adenocarcinomas. WHO Group Grade 5 was most common (n = 60; 53.09%), especially in the age group over 70. **Conclusion:** The number of prostatic hyperplasia cases is higher than prostate adenocarcinoma. The incidence of prostatic hyperplasia at the average age of 67 years, while adenocarcinoma was most commonly found in the age group over 70 years with the WHO group grade of 5 and Gleason Score of 9.

Keywords: adenocarcinoma, hyperplasia, primary prostate tumors

PRIMARY SQUAMOUS CELL CARCINOMA OF THE KIDNEY

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Background: Squamous cell carcinoma (SCC) of the kidney is an exceedingly rare cancer type, constituting only about 1.4% of all kidney malignancies. Over the last twenty-two years at RSUP Dr. Wahidin Sudirohusodo, only 6 cases have been documented. Sentra Diagnostik Patologia Makassar (SDPM) records only 2 cases. Remarkably, RSPTN Unhas Makassar has never encountered a case of renal SCC. This tumor is aggressive with a poor prognosis and is associated with kidney stones, infections, irrational use of analgesic medications, radiotherapy, or any irritants to the urothelium. Information on this tumor is limited to a few case reports, and guidance for its management is sparse. **Case Description:** A 48-year-old woman experienced pain in the right lumbar area. Abdominal CT results indicated impaired secretion and excretion functions in the right kidney accompanied by a right kidney stone. The patient underwent a nephrectomy. The histopathological results identified a squamous cell carcinoma in the kidney. **Discussion and Conclusion:** This type of tumor is found in an unusual location. Due to its non-specific clinical presentation and radiological imaging, this case is seldom considered preoperatively and necessitates several differential diagnoses. To establish a definitive diagnosis, a clinical correlation, macroscopic findings, histopathological images, and immunohistochemical examinations of GATA3, P63, and CK5/6 are essential. Results showed GATA3 negative in tumor cells, whereas P63 and CK5/6 were positive. Hence, the data concludes a primary squamous cell carcinoma in the kidney.

Keywords: CK5/6, GATA3, nephrolithiasis, primary squamous cell carcinoma (SCC) of the kidney, P63

ADENOCARCINOMA OF NEGLECTED EXTROPHY BLADDER CASE REPORT

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Background: Neglected bladder extrophy is a rare congenital malformation of the lower genitourinary tract. A long-term complication of neglected bladder extrophy is malignancy, mostly adenocarcinoma. Bladder adenocarcinoma is a rare malignancy with a poor prognosis and is estimated to account for 0.5-2% of all bladder malignancies. GLOBOCAN in 2020 stated that the percentage of bladder cancer reached 3% when compared to cancer diagnoses worldwide. **Case Description:** Male patient, age 43 years, with complaints of lumps resembling ulcers in the lower abdomen, lumps appear from birth, the lumps are initially reddish, but in the last 10 years turn whitish, lunge, bleed the last 2 weeks, and urination seeps through the lump. Local examination of the external genitalia shows a 5x7 cm lumpy mass, bleeds easily, and there is fluid seepage. CT scan of the abdomen shows defects in the pelvic cavity with a size of +/- 7.5 cm, accompanied by images of bladder extrophy measuring +/- 11.1 x 9 x 9.1 cm. Macroscopic examination acquires a firmly bordered mass, gray-white color, a springy dense consistency. Microscopic examination obtains tissue with tumor growth arranged in a glandular pattern consisting of proliferation of spherical nucleated cells, pleomorphic, crude chromatin, narrow cytoplasm, mitosis 12/10 HPF, tumor grows invasively into the stroma of fibrous connective tissue. **Discussion and Conclusion:** Neglected bladder extrophy in adult patients, is a very rare entity. This condition causes patients to have a higher risk of bladder malignancy, where adenocarcinoma is the most common type. It requires early management so that bladder extrophy does not develop into malignancy.

Keywords: adenocarcinoma, bladder, neglected bladder extrophy

EOSINOPHILIC CYSTITIS MIMICKING BLADDER NEOPLASM: A RARE REPORTED CASE

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Background: Eosinophilic cystitis is a rare inflammatory lesion of the bladder, characterized by massive eosinophilic infiltration. Until now, only 200 cases have been reported in the literature. Both the etiology, pathogenesis and treatment are not known with certainty. **Case Description:** We report the case of a man, aged 60 years with complaints of difficulty urinating accompanied by pain, urination has not been smooth since the last 3 days. The patient has a previous history of hematuria. Laboratory examination showed blood eosinophil, urea and creatinine within normal limits. Radiological examination revealed cardiomegaly with dilatation et elongatio aortae. Bladder tumor resection surgery was performed. Intraoperatively found nodules with a solid and hard consistency. From clinical symptoms and surgical findings suspected as a bladder neoplasm. Histopathological results concluded Eosinophilic Cystitis. **Discussion and Conclusion:** Eosinophilic cystitis is a rare condition, characterized histopathologically by infiltration of eosinophilic cells in the submucosa and muscularis layers. A study conducted by Van Der Ouden in 2000 reported the most common symptoms were polyuria (67%), dysuria (62%), macroscopic or microscopic haematuria (68%), suprapubic pain (49%), and urinary retention (10%) which is generally the same as the complaints in the cases we report. A definite diagnosis can only be made by histopathological examination and must be derived from an adequate deep biopsy, otherwise the diagnosis may be missed. The diagnostic feature is diffuse eosinophilic infiltration. Based on clinicopathological data, the final diagnosis in this case was Eosinophilic Cystitis.

Keywords: bladder, dysuria, eosinophilic cystitis, haematuria

MALIGNANT SOLITARY FIBROUS TUMOR OF THE ADRENAL GLAND

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Background: A solitary fibrous tumor is a rare type of spindle cell neoplasm that usually originates from the pleura and is rarely found in the adrenal area. There have been less than 24 reported cases of solitary fibrous adrenal tumors. This case report highlights a malignant solitary fibrous adrenal tumor that was discovered due to lumbar pain. **Case Description:** A 36-year-old male patient complained of intermittent back pain for the past year. An ultrasound examination followed by a CT scan examination showed a right suprarenal mass measuring 8.3 x 8.5 x 11.2 cm; no intrahepatic metastases were visible. The patient was referred to Dr. Sardjito Hospital and underwent an adrenalectomy. Histopathological examination shows a hypercellular adrenal tumor with a storiform and irregular arrangement of cells, along with dilated and branched blood vessels resembling a "staghorn." The tumor cells are spindle-shaped, moderate in size, with slight cytoplasm. Some cells are clear, while others are eosinophilic. The nuclei of the spindle cells have regular nuclear membranes, some with coarse chromatin and visible nuclei, while others are hyperchromatic. Mitoses are common. The stroma is hyalinized and partially myxoid, with scanty lymphocytic infiltration. Based on these characteristics, the tumor is diagnosed as a malignant SFT. The immunohistochemical staining revealed strong and diffuse CD34 positivity and nuclear STAT6 positivity, leading to the diagnosis of a malignant SFT. **Conclusion:** The adrenal solitary fibrous tumor is a rare medical condition that often grows slowly without noticeable symptoms. While most SFTs are not cancerous, in some rare cases, they can be malignant. Histopathology and immunohistochemical examination are used to differentiate between benign and malignant SFT. This information is crucial for managing the patient's treatment plan.

Keywords: adrenal gland, CD34, malignant solitary fibrous tumor, STAT6

METACHRONOUS DEVELOPMENT OF PRIMARY TESTICULAR DIFFUSE LARGE B- CELL LYMPHOMA FOLLOWING PURE TESTICULAR SEMINOMA

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Background: Testicular germ cell tumors (GCTs) are rare to occur in the elderly > 65 years, with a seminoma more common than a non-seminoma tumor. Metachronous contralateral testicular lymphoma tumor after seven years testicular seminoma diagnosis is very rare because only a few reported as metachronous to seminoma. Careful histopathological consideration and immunohistochemistry stains to avoid diagnosis fallacy by assuming the presence of recurrence of the prior tumor. Diffuse large B-cell lymphoma (DLBCL) following seminoma is reported. **Case Description:** 67-year-old male patient was diagnosed with pure seminoma in the left testicular in 2016. The diagnosis was obtained from a histopathological diagnosis. The patient was treated with a regimen of BEP (bleomycin, etoposide, prednisone) and followed by radiotherapy. For seven-year patient have had no health complaints. In 2023, the patient was diagnosed with primary DLBCL and first primary tumor as a differential diagnosis. Immunohistochemistry (IHC) stains were CD20 positive, CD3 and CD117 negative, Ki-67 positively stained in 60% tumor cells. The conclusion from the IHC stain was DLBCL High grade. The patient was treated with a chemotherapy regimen RCHOP for 6 periods with an interval of 21 days. **Discussion and Conclusion:** Given the uniqueness of our patient's metachronous second testicular primary, we sought to compare our case findings to available historical publications. We sought to address the issues of the timing and incidence of a second primary testicular malignancy varying histology, age of incidence. Strict follow-up, including physical examination and ultrasound examination of the contralateral testis, enabled early diagnosis of the second tumor, giving the patient a high likelihood of a definitive cure.

Keywords: histopathology, immunohistochemistry, large B-cell Lymphoma, metachronous, testis, seminoma

MICROSCOPIC SERTOLI CELL TUMOUR OF THE TESTIS MASQUERADE AS SEMINOMA

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Background: Sertoli cell tumours account for < 1% of all testicular tumours and are the second most common sex cord stromal tumour. Seminoma is the most common testicular germ cell tumour and constitutes > 50% of all the testicular germ cell tumours. Sertoli cell tumour is sex cord neoplasm composed of Sertoli cells arranged in a variety of patterns, most commonly as hollow or solid tubules. **Case Description:** We present a case report of a 18-year-old Aceh male patient with enlargement of right testis. The physical examination was nothing special except for swelling and solid mass in the right testicle. Preoperative hormone levels and tumour markers were not information. A right radical orchiectomy was performed on suspicion of malignancy. **Discussion and Conclusion:** The microscopic histopathology showed diffuse sheets of tumor cells with clear cytoplasm with intervening fibrous bands and massive lymphocytes, multinucleated giant cell 'mulberry like' which can cause diagnostic difficulties as Seminoma with syncytiotrophoblastic cells or testicular Sertoli cell tumor. Immunohistochemical analysis report showed WT-1 positive and Ki-67 low expression (< 20%), meaning of the tumor no predictive signs of aggressive behavior, which most closely resembled a Sertoli cell tumor.

Keywords: Ki-67, sertoli cell tumour, seminoma, testicular, WT-1

CUTANEOUS METASTASIS OF NEPHROBLASTOMA: AN EXTREMELY RARE CASE

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Background: Cutaneous metastasis only occur in 1-10% of cancer patients in general. In the case of nephroblastoma (Wilms tumor), the most common kidney malignancy in children, cutaneous metastasis is also very uncommon. This scarcity poses a challenge in the diagnostic process. Moreover, cutaneous metastasis indicates widespread dissemination and results in a poorer prognosis. **Case Description:** A 6-year-old female child was diagnosed with bilateral nephroblastoma and received vincristine and doxorubicin chemotherapy. She was referred to the dermatology clinic because of red lumps on his scalp, chest, and stomach that had been appearing for 7 days, with progressing shortness of breath. There is no itching or pain. On histopathological examination, epidermal atrophy, a diffuse inflammatory infiltrate consisting of neutrophils, lymphocytes, histiocytes, and an infiltrative small round cell tumor in the dermis were found. Immunohistochemical examination showed positive expression of WT1, and negative expression of chromogranin and synaptophysin. The diagnosis of cutaneous metastasis of nephroblastoma established based on histopathological and immunological findings. **Discussion and Conclusion:** Cutaneous metastases in nephroblastoma is a very rare phenomenon. This poses a challenge in diagnosis because of the indistinctive lesion characteristics and may mimic primary skin tumors or dermatoses, both clinically and histopathologically. This presented case morphologically showed small round cells like the blastemal component of nephroblastoma. This feature resembles the other tumors with small round cell morphology such as neuroblastoma, rhabdomyosarcoma, and lymphoma, and even dermatoses. Therefore, careful histopathological and immunohistochemical examination are needed to confirm the diagnosis.

Keywords: cutaneous metastasis, nephroblastoma, skin tumor, wilms tumor, WT1

HALF RIGHT-SIDED CHEST WALL TUMOR

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Background: Cavernous hemangioma, is a type of venous malformation resulting from endothelial dysmorphogenesis resulting from a lesion present at birth. The exact incidence of cavernous hemangiomas is difficult to estimate because they are often misdiagnosed as other venous malformations. It is important to be able to diagnose cavernous hemangioma because treatment for this lesion is less aggressive than for such an angiosarcoma. Histopathological examination of the surgical tissue can differentiate cavernous hemangiomas from vascular malignancies. **Case Description:** A 34-year-old woman with infraclavicular dextra chest wall tumor 10x6x4 cm in size, macroscopic appearance, the first tissue is 7x4.5x2.5 cm, the second tissue is 3.5x2.5x2 cm, in the form of fatty tissue, reddish brown, rubbery. In cross-sectional cutting, it appears small cavities of relatively the same size. At the edge of the cross-section appears solid white, yellowish. Microscopic picture, tissue section from chest wall tumor consisting of fibromuscular connective tissue stroma is swollen, hyperemic, bleeding accompanied by mature fat tissue, among which there is a proliferation of cystic dilated capillaries lined with endothelial cells, the lumen is filled with erythrocytes and a thrombus mass, lightly fibrous lymphocytes, histiocytes and PMN leukocytes. There was no sign of malignancy. **Discussion and Conclusion:** Cavernous Hemangioma (ICD-O: 9121/0) in the right infraclavicular region of the chest wall. It was the rare case because of age distribution or location. This morphology looks like arteriovenous malformation, but, the difference is the vascular type and the stromal surroundings.

Keywords: chest wall, cavernous hemangioma

CXCL12/PLK1 EXPRESSION CORRELATES WITH THE TUMOR SIZE OF CLEAR CELL RENAL CELL CARCINOMA

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Background: The most prevalent form of kidney cancer is clear cell renal cell carcinoma (ccRCC), and it is becoming more common. One of the crucial pieces of information for determining the severity of the disease is the T Stage. PLK1 and CXCL12 both play significant roles in a number of pathways that result in the proliferation of tumor cells. Clear cell renal cell carcinoma is one of many malignancies where this route is disrupted. **Objective:** The objective of this study was to describe CXCL12 and PLK1 expression and association in different ccRCC T stages. **Methods:** This study used a cross-sectional analytical observational design. 50 samples were used in the study, which ran from January 2014 to June 2022. Based on a histopathological analysis, the samples were categorized as T1, T2, T3, and T4. CXCL12 and PLK1 antibodies were used in an immunohistochemistry analysis. Statistical tests were used to investigate the correlation. **Results and Discussion:** In different T stages of ccRCC, there was a positive correlation between the expression of CXCL12 and PLK1 ($p<0.05$), but when these two proteins were correlated separately, there was no significant difference ($p>0.05$). **Conclusion:** In this study, CXCL12 and PLK1 expression varied across distinct T stages, but when they worked together, CXCL12 had a favorable impact on PLK1, increasing tumor size.

Keywords: CXCL12, kidney cancer, PLK1, T stage

ZIEHL-NEELSEEN STAINING COULD ASSIST ON THE DIAGNOSIS OF CUTANEOUS MASTOCYTOSIS, A CASE REPORT WITH HISTOCHEMICAL COMPARISON

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Background: Cutaneous mastocytosis is a rare skin disorder caused by an excess accumulation of mast cells within the skin. The findings of mast cells microscopically is required to establish a definitive diagnosis. Several staining can be used to visualize mast cells in tissue sections, but the sensitivity and specificity of each stain is varied. **Case description:** A 9 years old boy was having symptoms of papular lesions distributed over the body since 6 months prior to admission. There was a history of recurrent itching and skin rashes. A routine histopathological skin biopsy specimen showed accumulation of mononuclear cells within the dermis. However Giemsa staining was failed to show mast cell's granules. Subsequent histochemistry staining was performed including Ziehl-Neelsen, Toluidine blue, Safranin-O and Immunohistochemistry of CD117 to visualize mast cells. **Discussion and Conclusion:** Microscopically mast cells appear as mononuclear cells that could resemble histiocytes. Giemsa and Toluidine blue staining are the most commonly used. This case was failed to show mast cells granules on Giemsa staining, while Ziehl neelsen, Safranin-O and immunohistochemistry of CD-117 showed positive reaction. Ziehl-Neelsen showed easily identified staining quality equal to Toluidin blue.

Keywords: cutaneous mastocytosis, histochemistry, mast cell, urticaria pigmentosa

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