Pertemuan Ilmiah Regional
Perhimpunan Dokter Spesialis Patologi Indonesia
JOGLOSEMAR-PURWOKERTO
Seminar Nasional
Ikatan Teknisi Patologi Anatomi Indonesia (ITPAI)

Sabtu, 5 Mei 2018
Royal Ambarrukmo Hotel Yogyakarta

Gastrointestinal Pathology and Recent Updates On Neuroendocrine Tumors: From Morphology to Clinical Management in Personalized Medicine Era

Peran ATLM dalam Perkembangan Patologi & Manajemen Sampel di Era Kedokteran Molekuler

Proceeding Book
Yogyakarta 2018
Proceeding Book

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SPESIALIS PATOLOGI INDONESIA. JOGLOSEMARPURWOKERTO

Gastrointestinal Pathology and Recent Updates On
Neuroendocrine Tumors: From Morphology To Clinical
Management in Personalized Medicine Era

Royal Ambarukmo Hotel Yogyakarta, 5 April 2018

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KATA PENGANTAR

Kejadian tumor saluran pencernaan, terutama kanker kolorektal, semakin meningkat dari tahun ke tahun. Kanker kolorektal merupakan kanker terbanyak kedua pada pria dan terbanyak ketiga pada wanita di Indonesia, dan cenderung meningkat pada kelompok usia muda.


PIR IAPI Joglosemar-Purwokerto 2018 juga diselenggarakan bersamaan dengan Seminar Nasional Ikatan Teknisi Patologi Anatomi Indonesia (ITPAI) yang bertema Peran ATLM dalam Perkembangan Patologi dan Manajemen Sampel di Era Kedokteran Molekuler. Seminar nasional tersebut bertujuan untuk meningkatkan pengetahuan dan keterampilan ahli teknologi laboratorium medis (ATLM) dalam menangani spesimen pre-analitik dan menambah pengetahuan tentang perkembangan teknik patologi di era kedokteran molekuler. Dengan diselenggarakannya kedua acara tersebut secara bersamaan, diharapkan para dokter spesialis patologi anatomik dapat berinteraksi dengan para ATLM yang merupakan mitra terdekat dalam menghasilkan sediaan yang bermutu tinggi. Dengan interaksi dalam forum ilmiah tersebut, diharapkan terjadi pertukaran pengetahuan dalam upaya peningkatan pelayanan patologi anatomik.

Buku abstrak ini merangkum seluruh materi yang dibicarakan dan dibahas dalam kedua acara tersebut, baik materi dari pembicara maupun materi poster dari para peserta. Semoga buku ini bermanfaat dan membuka peningkatan derajat kesehatan masyarakat Indonesia.

Yogyakarta, 5 Mei 2018
Ketua Pelaksana

Dr. Hanggoro Tri Rinonce, Sp.PA, Ph.D
## PROGRAM

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<td>Sabtu, 5 Mei 2018</td>
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| 09.00-09.30 | Pembukaan
Menyanyikan lagu Indonesia Raya dan Mars IAPI
Sambutan Ketua Panitia
Sambutan Ketua IAPI Yogyakarta
Sambutan dan Pembukaan oleh Dekan FKKMK UGM |
| 09.30-09.45 | Coffe Break 1                                                           |
| 09.45-11.00 | Sesi I: -Moderator: Dr. dr. Irianiwati, Sp.PA(K)
1. *Ethics in Anatomical Pathology Services*, by Dr. dr. Indra Wijaya, Sp.PA(K)
2. *Clinical Aspect of Neuroendocrine Tumors of The Gastrointestinal Tract*, by Dr. dr. Neneng Ratnasari, Sp.PD-KGEH
3. *Challenge of Surgical Aspect in Neuroendocrine Tumors of The Lower Gastrointestinal Tract*, by Dr. dr. Yudha Handaya, Sp.B-KBD |
| 11.00-12.00 | Sesi II - Moderator, dr. Nungki Anggorowati, Sp.PA, PhD
1. *Pathological Aspect of Neuroendocrine Tumors of The Gastrointestinal Tract*, by Dr. dr. Ahmad Ghozali, Sp.PA(K)
2. *Case Series and Clinicopathological Findings of Neuroendocrine Tumors of Gastrointestinal Tract* by dr. Susanna Hilda Hutajulu, Sp.PD-KHOM, Ph.D |
| 12.00-13.00 | ISHOMA dan *Lunch Symposium*                                              |
| 13.00-14.15 | Sesi III – Moderator: dr. Ery Kus Dwianingsih Sp.PA, PhD
1. *Molecular Aspects of ALL RAS and BRAF Mutations in Colorectal Carcinoma*, by dr. Didik Setyo Heriyanto, Sp.PA, PhD
2. *Sponsor Speaker: Diagnostic Pitfalls in Gastrointestinal Tumors*, by Dr. Anthony Chan, BMSc (Hons), MBChB, FRCPA, FHKCP, FHKAM (Pathology) |
| 14.15-15.00 | Pengumuman dan Presentasi Pemenang Poster, *Door Prize* dan Penutupan |
| 15.00-15.30 | Sholat dan *Coffee Break*                                                |
| 15.30-18.00 | Workshop – Neuroendocrine Tumors                                        |
| 15.30-17.30 | Moderator: Dr. Didik Setyo Heriyanto, Sp.PA, Ph.D
Recent Updates on Neuroendocrine Tumors by Dr. Antony Chan, BMSc (Hons), MBChB, FRCPA, FHKCP, FHKAM (Pathology) – Hong Kong
Case Discussion |
| 17.30-18.00 | Penutupan Workshop                                                       |
ETIKA PELAYANAN PATOLOGI ANATOMIK (Ethics in Anatomic Pathology Service)
Indra Wijaya (IAPI Cabang Semarang)
Departemen Patologi Anatomi Fakultas Kedokteran Universitas Diponegoro

Abstrak

Pesatnya dinamika ilmu pengetahuan dan teknologi kedokteran global, perkembangan kehendak masyarakat serta dinamika antisipasi perubahan sistem kesehatan nasional, termasuk afirmasi kepada upaya pelayanan kesehatan masyarakat bersifat promotif dan preventif, khususnya subsistem pembiayaan pelayanan kesehatan pada era Jaminan Kesehatan Nasional, berpengaruh terhadap etika pelayanan dokter, khususnya dokter spesialis Patologi Anatomi.

Di Indonesia, perumusan norma dan penerapan nyata etika kedokteran kepada perseorangan pasien/klien atau kepada komunitas/masyarakat dalam segala bentuk fasilitas pelayanan kesehatan/kedokteran juga didasarkan atas azas-azas ideologi bangsa dan negara Pancasila serta Undang-Undang Dasar 1945.

Seorang Dokter Spesialis Patologi Anatomi wajib selalu melakukan pengambilan keputusan profesional secara independen dan mempertahankan perilaku profesional dalam ukuran tertinggi, untuk itu perlu penyegaran pengetahuan kita tentang Kode Etik Patologi Indonesia, yang mungkin sudah mulai pudar, seiring dengan bertambahnya usia.

Di samping pengetahuan kita tentang Kode Etik Patologi Indonesia, dalam pelayanan Patologi Anatomi sehari-hari perlu pula kita segarkan pengetahuan tentang Standar Profesi Dokter Spesialis Patologi Anatomi, agar dapat menyesuaikan diri dengan perkembangan ilmu kedokteran, serta tetap mempertahankan mutu pelayanan Patologi Anatomi yang prima.
Clinical Aspect of Neuroendocrine Tumors of the Gastrointestinal Tract

Neneng Ratnasari

Division of Gastroentero-Hepatology, Department of Internal Medicine, Faculty of Medicine, Universitas Gadjah Mada/Dr Sardjito Hospital, Yogyakarta

Neuroendocrine Tumors (NETs) account for about 0.5% of all newly diagnosed malignancies. The incidence is approximately 5.86/100,000 per year, with a female preponderance of around 2.5:1. NETs manifest in the gastrointestinal tract mainly as carcinoid and pancreatic islet-cell tumors. They comprise an interesting group of rare neoplasms that are derived from neuroendocrine cells interspersed within the gastrointestinal system and throughout the body. There are some tumors that are classified as Nets: carcinoid, gastrinoma, insulinoma, glucagonoma, somatostatinoma, vipomas and pancreatic polypeptideoma. The variation of clinical appearance of NETs depended on the origin of the tumors, sized and metastasis.

Carcinoid tumors are the most common neuroendocrine tumors. They arise from neuroendocrine cells located primarily in the submucosa of the intestine but can also arise in the main bronchi. Gastrinoma is growth from ulceration in GI tracts. Insulinomas are the most common type of islet-cell tumor. Glucagonomas are rare alpha-cell tumors of the pancreas that occur in people between 50 and 70 years old and mostly malignant, with metastases. Somatostatin-secreting tumors (somatostatinoma) are the majority tumor that was found in the pancreas or duodenum, generally malignant. Vipomas are the tumor in which mediated by a hormone called vasoactive intestinal polypeptide (VIP) and other peptides secreted by malignant islet-cell tumors in adults and by benign ganglio-neuroblastomas in children, are located in the pancreas and are usually large and solitary. Pancreatic polypeptideoma is located primarily within the pancreas, where it is synthesized and released from PP cells, 50% to 75% of nonfunctioning endocrine tumors can be classified as pancreatic polypeptideomas.
Challenge of Surgical Aspect in Neuroendocrine Tumors of The Lower Gastrointestinal Tract

Yuda Handaya

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Neuroendocrine neoplasms in the digestive system are generically referred as gastroenteropancreatic tumors (GEP- NETs). The lower digestive system NET or Colorectal neuroendocrine tumors (CRNETs) are a group of heterogeneous neoplasms traditionally referring to carcinoid tumors. The annual incidence of rectal neuroendocrine tumors (NET) is approximately 0.86/100,000. Despite the obviously increasing incidence of CRNETs in recent decades, these tumors remain uncommon, accounting for ~20% of all NETs. Moreover, the overall incidence of CRNETs is slightly higher in males than in females. Neuroendocrine tumors originate from neuroendocrine cells of endodermal origin. Most of the NET's express chromo-granin A and synaptophysin. Serum Chromagranin A is a useful marker in many neuroendocrine tumors but of limited use in non-metastatic rectal NETS. The management of these lesions depends upon the size of the lesion, involvement of the muscularis, location, and presence of metastatic disease. Small lesions (1 cm) can often be treated locally, either endoscopically or transanally. However, larger lesions (> 2 cm) require a formal oncologic resection. Risk factors for metastatic disease are tumor size >1 cm, muscularis propria invasion, high proliferation index and lymphovascular invasion, The prognosis of patients with metastatic disease is poor. Challenge of Surgical Aspect in Neuroendocrine Tumors of The Lower Gastrointestinal Tract is a problem of early diagnosis and screening so that lower gastrointestinal tumors of NET or other tumors are difficult, the risk of complications is high and the prognosis is not good because of the advanced stage.

Keywords: Neuroendocrine tumor, Carcinoid, Lower gastrointestinal
ABSTRACT

RECENT UPDATE ON GASTROINTESTINAL TRACT NEUROENDOCRINE NEOPLASM

Ahmad Ghozali

Department Anatomical Pathology, Faculty of Medicine, Gadjah Mada University / RSUP Dr Sardjito.

Neuroendocrine neoplasms (NENs) are originating from neuroendocrine cell in almost every epithelial organ. NENs have substantial variations in both tumor biology and clinical presentation. The biology of each NEN depends on its primary tumor localization, cellular morphology, mitotic activity, and clinically manifest expression of autonomous hormone secretion of either a peptide hormone or biogenic amine. Approximately three-quarters of all NENs originate from the gastrointestinal tract. This review will focus on the latest WHO 2017 classification and grading system of NENs in gastrointestinal tract.
CASE SERIES OF NEUROENDOCRINE TUMORS OF THE GASTROINTESTINAL TRACT

Susanna Hilda Hutajulu
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Neuroendocrine tumors of the gastrointestinal tract represent uncommon neoplasm among other malignancies. They are included in a heterogenous tumor group originating from the diffuse neuroendocrine system. Recently, their incidences have increased due to the increased availability of diagnostic tools as well as public and medical awareness. Despite global advances in early detection and management, the prognosis remain poor. Moreover, only few publications have come from the local institutions. This situation limited the experiences of local clinicians in term of disease management. The present series provided cases of NET of the gastrointestinal, either from local setting or from the international literature. This series aimed to bring updated information of the disease to a broad audience in order to increase knowledge and awareness among pathologists and oncologists. From international reports we also learnt the recent development in diagnosis and management. In fact, these complex neoplasms need to receive more specialized attention. Early detection in order to prevent morbidity from NETs is also advocated.
Abstract:
The presence of a RAS mutation is a powerful negative predictor of response to anti-EGFR monoclonal antibody therapy and worse patient outcome, respectively. RAS mutation is present in about 40% of colorectal carcinomas. BRAF mutations are recognized as a marker of very poor prognosis. Overexpression of EGFR, as well as activating mutations in the signaling pathway (e.g. KRAS and BRAF), is associated with many cancers, including CRC. The human RAS family consists of three proto-oncogenes, Harvey (H)-, Kirsten (K)- and N-RAS. KRAS mutations result in constitutive pathway activation, regardless of whether EGFR is inhibited. About 35-45% of colorectal tumors have at least one activating mutation in the K-RAS gene, thus constitutively activating cell signaling downstream of EGFR making it resistant to EGFR targeted therapies. New RAS mutational status shows increased proportion of patients with mutations compared to wild type mutations. Up to now, the mutations can be identified by Sanger sequencing and real-time PCR commonly. Even though Sanger sequencing is considered the gold-standard technique, novel studies showed both sequencing and the real-time PCR-based assay are reliable tests for KRAS mutation analysis in FFPE colorectal carcinoma samples. In addition, the real-time PCR based assay is the method of choice in samples with a tumor cell percentage below 30%. Modern management relies initially on clinical recognition of suspicious lesions and histopathological assessment and grading followed by molecular examination which makes the demand for pathologists’ capability to determine the metastasis and mutation status has risen. Therefore, constructing a good communication between clinicians and pathologists become a critical component in clinical practice, the neglect of which can lead to missed diagnosis and contribute to inappropriate therapy with potentially disastrous consequences.
DIAGNOSTIC PITFALLS IN GASTROINTESTINAL TUMORS

Antony Chan

Associate Professor, Department of Anatomical & Cellular Pathology Prince of Wales Hospital Hong Kong

Gastrointestinal polyps and tumors are one of the commonest tissue specimens encountered in our routine pathology practices. Most of them are simple and straightforward, but a small proportion can be challenging with potential diagnostic pitfalls. These diagnostic pitfalls may range from benign mimics of malignancy (e.g., pseudo-invasion of adenomatous polyp and mucosal prolapse, atypical cellular infiltrate in the lamina propria), lesions with overlapping histological appearance or confusing terminology (e.g. colonic polyps with serrated architecture), polyps in setting of polyposis syndrome, to unusual lesions (e.g. polypoid mesenchymal neoplasm, ectopic tissue or metastatic tumor in gastrointestinal tract). This lecture uses various illustrative examples to demonstrate and discuss these potential pitfalls. Better recognition and understanding of these pitfalls are essential to avoid misdiagnosis and more importantly minimize over- or under-treatment to our patients.
Neuroendocrine tumors (NETs) are an uncommon epithelial neoplasm, and three-quarters of them arise from the gastrointestinal tract. Ever-changing and inconsistent nomenclature of NET is one of the challenges to clinicians and pathologists. Pathologists play a critical role in providing the proper diagnostic terminology and grade of NET and recognizing precursor lesions and associated syndromes, which are crucial for appropriate clinical management for patients. Differentiation between NET and its morphological mimics, and appreciation of aberrant immunophenotypes of NET are important for pathologists to achieve an accurate, reliable diagnosis. Through different demonstrative examples, this interactive workshop helps the participants to handle diagnostic challenges in NETs.
ASSOCIATION BETWEEN AGE AND SEX WITH HISTOLOGICAL TYPE OF CARCINOMA THYROID IN MARGONO SOEKARJO HOSPITAL PURWOKERTO

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¹Faculty of Medicine, Jenderal Soedirman University, Purwokerto, Central Java, Indonesia ²Department of Anatomical Pathology, Faculty of Medicine, Jenderal Soedirman University, Purwokerto, Central Java, Indonesia ³Department of Surgery, Margono Soekarjo Hospital

Background: Thyroid carcinoma is a malignancy of the endocrine glands that are common and the incidence increases every year. The number of events varies worldwide, about 0.5-10 people per 100,000 population. Thyroid carcinoma has several types of histological, each of which has a different prognosis. Age and sex are known to be factors associated with histological types that can determine the prognosis of thyroid carcinoma.

Objective: The purpose of this study was to investigate the relationship between age and sex on histological type of thyroid carcinoma at Anatomy Pathology Laboratory of Margono Soekarjo Hospital in 2007-2016.

Method: The design of this study was cross sectional study. The sample used total sampling technique, where the research sample is all medical record data of patients diagnosed with thyroid carcinoma at Anatomy Pathology Laboratory of Margono Soekarjo Hospital in 2007-2016. Bivariate analysis using chi square.

Results: The sample age is divided into 3 categories; <20 years old, 20-40 years old and > 45 years old. While histological type of carcinoma thyroid were papillary carcinoma, follicular carcinoma, and anaplastic carcinoma. The youngest age was found to be a 10-year-old with papillary carcinoma, whereas the oldest age was 90 years with papillary carcinoma as well. In addition, the highest number of patients with thyroid carcinoma is women. Age was associated with histological type with p = 0.029 (p <0.005) and sex was not related to histological type with p = 0.387 (p <0.05).

Conclusion: Age is associated with histological type of carcinoma thyroid; papillary carcinoma, follicular carcinoma, and anaplastic carcinoma. Sex is not associated with histological type of carcinoma thyroid; papillary carcinoma, follicular carcinoma, and anaplastic carcinoma.

Keywords: thyroid carcinoma, age, sex, histological
BASAL CELL CARCINOMA IN YOGYAKRTA, INDONESIA: A CLINICAL AND PATHOLOGICAL STUDY

Wafa Luthfiananda; Dyah Ayu Mira Oktarina; Ery Kus Dwianingsih; Hanggoro Tri Rinonce

1Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia;
2Department of Dermatology and Venerology, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Dr. Sardjito Hospital, Yogyakarta,

Background: Basal cell carcinoma (BCC) is the most common malignancy of the skin which commonly presents in the sun exposed areas such as the facial region. The risk factors of BCC are ultraviolet exposure, fair skin color, male gender, older age, and family history of skin cancer. Ultraviolet exposure is the main risk factor for the development of BCC. People living in a tropical country such as Indonesia get relatively high ultraviolet exposure. However, published data regarding clinical and pathological profile of BCC are limited.

Objectives: To elucidate the clinicopathological profile of BCC in Dr. Sardjito Hospital, Yogyakarta, Indonesia. Method: Data were collected from the medical record of patient with BCC in Dr. Sardjito Hospital from 2011 to 2015. A total of 124 cases were diagnosed as BCC during that period. Their clinical and pathological data were analyzed.

Result and Discussion: Generally, the number of BCC case increased year by year. Interestingly, BCC was more commonly found in female (62.40%), different from previous studies from other countries. It mostly occurred in 61 to 80-year-old people (62.90%). The most common site was the head and neck (93.80%), with nasal (20.93%), buccal (19.38%), and orbita (17.05%) regions were the most common affected anatomical location respectively. Nodular subtype was found to be the most frequent subtype (39%). Most lesions had the size equal or less than 2 cm (42.74%) and 54.72% of cases had incomplete resection. Twenty four cases (19%) were recurrent. However, no metastasis cases were found among the patients.

Conclusion: In Yogyakarta, Indonesia, BCC is more commonly found in female. Even though the size of the tumor is relatively small, most of the tumor excised incompletely. However, only few numbers of cases are recurrent and no metastatic cases were identified among the patients. Further detailed study is needed to know the cause of that results.

Keyword: basal cell carcinoma, Yogyakarta, Indonesia
CASE SERIES: INCIDENT NEUROENDOCRINE TUMOUR IN Dr.KARIADI GENERAL HOSPITAL

Hasnul Ramadhani1, Devia Eka Listina2

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1. Resident of Anatomical Pathology Department. Faculty of Medicine, Diponegoro University, Semarang, Indonesia. 2. Lecturer of Anatomical Pathology Department. Faculty of Medicine, Diponegoro University, Semarang, Indonesia.

Introduction: Over 60% of all neuroendocrine tumours are found in the gastrointestinal tract. Gastrointestinal neuroendocrine tumours are rare and constitute <2% of all gastrointestinal cancers. Most tumours are slow growing and asymptomatic, although metastatic lesion may be the presenting feature in some patients.

Material and methods: Data was collected retrospectively over a 3 year period from 2015 until 2017. All patients with proven histopathology of neuroendocrine tumour were included.

Results: There were 6 patients with histopathology positive of neuroendocrine tumour. 3 males and 3 females with the age range of 8-88 years. The commonest presenting symptoms were anemia, diarrhea, weight loss and abdominal pain. The duration of symptoms before the diagnosis was made ranged between 2 months and 5 years.

Conclusion: Mixed adenoneuroendocrine carcinoma, composite tumor, mixed tumor, colorectal, stomach, caecum, maspin, carcinoembryonic, antigen, keratin 7. The duration of symptoms before the diagnosis was made ranged between 2 months and 5 years.

Keyword: adenoneuroendocrine carcinoma
CLINICOPATHOLOGICAL PROFILE OF WILMS TUMOR IN DR. SARDDJITO GENERAL HOSPITAL, YOGYAKARTA, INDONESIA

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Background: Wilms tumor is the most common kidney cancer in children, which is one of the leading causes of death in children. About 90% of Wilms tumor cases arise sporadically and unilaterally. The peak age of presentation is during the third year of life. The most common clinical presentation is abdominal mass. Multimodality approach to therapy gives 90% 2-year survival rate. However, mortality rate in the developing country is still high. Research about clinicopathological profile of Wilms tumor in Indonesia is very limited.

Objective: The aim of this study is to understand the clinicopathological profile of Wilms tumor in Dr. Sardjito General Hospital, Yogyakarta, Indonesia.

Method: This study was a descriptive observational study using cross-sectional design. Clinical and pathological data were collected from patient's medical records in Dr. Sardjito General Hospital, from 2011 to 2016.

Result and Discussion: There were 25 patients diagnosed with Wilms tumor. The tumor occurred more in female (52%). The mean age at the first diagnosis was 38 months. All patients (100%) have the unilateral tumor. The tumor size was mostly (67%) equal or more than 10 cm. The most frequent sign and symptom were abdominal mass. Ninety-two percent patients have favorable histology. The most cases (68%) had triphasic morphology. The most common metastasis site of tumor was liver (40%), followed by lung (30%), skeletal bone (20%), and spleen (10%). Eighty-four percent patients received chemotherapy, 80% received surgery, and 28% received radiotherapy. The gender distribution and the most common metastasis site in this study were different with previous study.

Conclusion: The clinicopathological profile of Wilms tumor in Yogyakarta, Indonesia, generally is same with other studies from other countries, except the gender distribution and the most common metastasis site. Further prospective study regarding the prognosis of the patients is needed.

Keywords: clinicopathological profile; Wilms tumor; pediatric.
CORRELATION BETWEEN GENDER, AGE AND TOPOGRAPHY WITH HISTOLOGICAL TYPE OF COLORECTAL CANCER (A cross sectional study in Margono Soekarjo Hospital Purwokerto)

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Background: Colorectal cancer (CRC) is a major burden worldwide. It is an emerging public health problem in Indonesia and ranks among the three highest cancers. Gender, age, and topography of colon has been discussed in several literature as risk factors of CRC. Unfortunately, the results are still remain a controversy.

Objective: This study aimed to analyze correlation between gender, age, and topography with histological type of CRC.

Methods: Using the anatomical pathology laboratory database, we analyze histologic features of 726 samples of CRC. CRC features were divided into carcinoma, sarcoma, and lymphoma. Gender was categorized as male and female. Age criteria was separated into 2 groups, 40 year old and > 40 year old. Topography of colon was divided into proximal (caecum-transverse colon) and distal (descended colon-rectum). Chi-square ($\chi^2$) test was used to correlate the variables.

Results: Of 726 CRCs, 682 (93.94%) were carcinomas, 15 (2.06%) were sarcomas, and 29 (4%) were lymphomas. There were no significant correlation between gender and age with histological type of CRC ($p > 0.05$). Otherwise, there was significant correlation between topography and histological type of CRC ($p < 0.05$). Of 682 carcinomas, 589 (86.4%) were found in distal colon. Of 15 sarcomas, 11 (73.3%) were found in distal colon. Of 29 lymphomas, 25 (86.2%) were found in proximal colon.

Conclusion: Histological type of CRC is similar in male and female, also in young and older patients. Incidence of carcinoma and sarcoma are higher in distal colon while majority of lymphoma is found in proximal colon.

Keyword: Colorectal cancer, gender, age, topography.
DIAGNOSTIC VALUE OF FINE NEEDLE ASPIRATION BIOPSY IN BREAST LESIONS AT dr. SOERADJI TIRTONEGORO HOSPITAL, KLATEN

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Background: Breast lesion is the most common lesion in woman. Histopathological examination of open biopsy specimen is used as the gold standard for diagnosing breast lesion. However, open biopsy is an invasive procedure. Therefore, fine needle aspiration biopsy (FNAB) is preferred to be used as an alternative by many clinicians. However, some clinicians argue that FNAB has low diagnostic value.

Objective: The purpose of this study is to find out the diagnostic value of FNAB in breast lesions at dr. Soeradji Tirtonegoro Hospital, Klaten, Central Java. Method: The medical records of patients underwent FNAB and open biopsy for breast lesions form January 2015 to December 2016 was reviewed. The result of FNAB cytology examination was compared to histopathological examination result. The sensitivity, specificity, positive predictive value, negative predictive value, and accuracy were analyzed respectively.

Result and Discussion: FNAB was conducted to 145 patients consisted of 144 women and 1 man. Based on examination of FNAB specimens, 91 cases were benign lesions, whereas 54 cases were malignant lesions. However, in histopathological examination, there were 80 benign cases and 65 malignant cases. The FNAB cytology examination showed 76.9% of sensitivity, 95% of specificity, 92.6% of positive predictive value, 83.5% of negative predictive value, and 86.9% of accuracy. The sensitivity was relatively low compare to the other studies from other centers. Most of the false negative results were caused by inadequate sampling.

Conclusion: FNAB can be the good alternative procedure for diagnosing breast lesions in clinical setting. However, its sensitivity should be improved by implementing ultrasound or computed tomography guided FNAB.

Keyword: diagnostic value, fine needle aspiration biopsy, breast lesion, Klaten, Central Java
HISTOPATHOLOGICAL PATTERNS OF GALL BLADDER DISEASES WITH SPECIAL REFERENCE TO INCIDENTAL CASES IN BOYOLALI PANDAN ARANG GENERAL HOSPITAL

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Background: Cholecystectomy for gall bladder dieases is commonly performed surgical procedure worldwide. Routine examination of the gall bladder after surgery showed interesting possibilities including carcinoma.

Objectives: The study was aimed at assessing the need for histopathological examination in all cholecystectomy specimens, and to quantify the various outcomes in a type C level hospital.

Methods: A total of 81 cases of cholecystectomy specimens were studied to evaluate the histopathological patterns. The specimens were sent to the department of Pathology of from department of surgery. The age, sex, and other hospital details were recorded from the month of March 2015 to March 2018. The specimens were examined grossly and processed routinely. Sections were stained with haematoxylin and eosin. The gross and microscopic findings examined and noted.

Results and discussions: In our study out of 81 cases of which 56 cases were female and 25 cases were male. The Male: Female ratio was 1:2.2 in our study. Age distribution showed between 21-30 there were 2 patients, between 31-40 years 12 patients, between 41-50 years there were 21 patients, between 51-60 years 22 patients and above 60 years 24 patients. Neoplastic to nonneoplastic cases is 1:39.5 and percentage of neoplastic cases is 2.47% in our study. Histomorphological variants of the 81 cases in our study showed that maximum cases were of chronic cholecystitis with cholelithiasis (75 cases), included follicularis and glandularis type, followed by chronic supurative cholecystitis with cholelithiasis (4 cases), and 2 cases of adenocarcinoma, which 1 case were detected incidentally.

Conclusions: Our study strongly recommends routine histopathological examination of all cholecystectomy specimens for detection of various variants of chronic cholecystitis and also of incidental carcinoma of gall bladder which helps in their treatment and prognosis.

Keyword: Cholecystitis, Incidental adenocarcinoma of gall bladder
MOLECULAR TYPES ON VARIOUS CHARACTERISTICS OF BREAST CARCINOMA PATIENTS AT GENERAL HOSPITAL CENTER OF DR. KARIADI IN 2015-2017

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Background: Immunohistochemistry examination is important for determining the molecular type as the prognosis of malignancy of the breast. Some of the biomarkers in breast carcinoma examination are Estrogen Receptor (ER), Progesterone Receptor (PR), Human Epidermal Growth Factor Receptor-2 (HER-2), and Ki-67 proliferation index.

Objective: The purpose of this study was to present the profile of immunohistochemistry examination of ER, PR, HER-2, and Ki-67 associated with that molecular type in various characteristics of breast carcinoma patients at General Hospital Center of Dr. Kariadi in 2015-2017.

Methods: This study using retrospective cross-sectional and descriptive observational method. The population of this study are all patients with breast carcinoma based on histopathology and immunohistochemistry examination at anatomical pathology laboratory of General Hospital Center of Dr. Kariadi in 2015-2017.

Results and Discussion: The results of the study are almost all histopathological types of breast carcinoma is Invasive Carcinoma of no Special Type (NST) with 369 cases (86.6%), and most of them are <50 years old, the most frequent histopathological grade is grade II with 320 cases (75.1%), and Luminal B as the most common molecular type of breast cancer with 159 cases (54.9%).

Conclusion: Luminal B type are the most common molecular type of breast cancer that’s more often found in patients <50 years of age and in grade II. While luminal A is often at age >50 years and grade II, HER-2 positive often at <50 years and grade II, and basal-like often at <50 years and grade III.

Keyword: immunohistochemistry examination, breast carcinoma, molecular type, invasive ductal carcinoma, luminal b
APPENDICEAL NEUROENDOCRINE TUMOR GRADE I: A CASE REPORT

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Background: Neuroendocrine tumors (NETs) are rare neoplasm but it is the most common tumors in appendix, accounting for 50-70% of all appendiceal neoplasms and for 19% of all gastrointestinal NET. Appendiceal NETs are either asymptomatic or present as acute appendicitis, which is then diagnosed incidentially as appendiceal NETs during or after surgical procedure.

Case description: We report a 18 years old female patient, presented with acute right lower abdominal pain. She was diagnosed with acute appendicitis and undergone appendectomy procedure. Microscopic examination revealed tumor nests arranged in tubular and solid patterns. Tumor cells were small, relatively monomorph, with salt and pepper appearance, infiltrating through serous layer of appendic wall. Immunohistochemical (IHC) examination showed strong expression of chromogranin and NSE, and Ki 67 staining showed 1% of positivity, giving solid diagnosis of NET Grade I. Other organ involvement is not observed.

Discussion: Appendiceal NETs are usually benign, while certain cases may also show potential of malignancy and metastasis. Precise diagnosis is important to determine its prognosis and treatment. In this case, diagnosis of appendiceal NET grade I was established by its morphological features which supported by IHC staining.

Keywords: Neuroendocrine tumor Grade I, appendix
BENIGN CHONDROID SYRINGOMA OF THE ORBIT: A RARE CAUSE OF EXOPHTHALMOS

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Background: Chondroid syringoma (CS) of the orbit is an extremely rare benign neoplasm that exhibit both epithelial and mesenchymal components, originating from sweat glands and most often seen in the head-and-neck region of patients in the sixth to seventh decade with a male preponderance.

Case Description: We report a case of a 58-year-old woman with orbital CS associated with exophthalmos of left eye developed slowly over 8 years and painful. Visual acuity was 1/60 of left eye and 3/60 of right eye. Grossly measuring 3x3x2 cm and 3x3x1.5 cm, tan and firm.

Discussion: Chondroid syringoma present as a slow-growing, non-tender, non-ulcerated mass with smooth, firm, area on the head and neck about 60-80% of cases, reported sites were eyelid, orbit and brain. Due to the rare and unremarkable clinical presentation, chondroid syringoma could be overlooked and misdiagnosis as skin lesion.

Conclusion: Chondroid syringoma of retro-orbit are rare benign clinical entities, Careful clinical and histological evaluation is required to obtain diagnosis, follows with anterior orbitomy of the left eye.

Keyword: Chondroid syringoma, exophthalmos, intra-orbital tumor
CASE REPORT A RARE CASE OF MEDULLARY THYROID CARCINOMA

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Background: Medullary thyroid carcinoma (MTC) is a rare malignant tumour of the thyroid gland originating in parafollicular C cells. MTC accounts for 2–3% of all thyroid malignancies. About 75% of MTCs are sporadic, while the remainders are hereditary. The 10-year survival rate for patients with MTC is 75%–85%.

Case Description: A 50 year-old male patient with a 10-year history of painless nodule on dextra lobe of thyroid. The patient undergo a thyroid ultrasound, thyroid function tests and radionuclide scanning. A thyroidectomy was done. Macroscopically consist of a solid mass. Microscopically it is composed of proliferation of thyroid follicles and groups of malignant cells with lobular, trabecular, papillary and solid pattern separated by fibrous connective tissue with focally calcified amyloid deposits. The tumour cells showed positivity for chromogranin, synaptophysin, and CK7 by immunohistochemistry.

Discussion: MTC is associated with mutation in the Rearranged during Transfection (RET) proto-oncogene. Most patients present with a painless thyroid mass. As many as 70% of patients who present with a palpable thyroid nodule have cervical nodal metastases and 10% have distant metastases. Metastases occur in the liver, lung, bone, and brain. MTC can be cured only by complete resection of the thyroid tumour and any loco-regional metastases.

Conclusion: Based on the clinical examination, thyroid ultrasound, thyroid function tests, radionuclide scanning, macroscopic, microscopic and immunohistochemical test, the patients was diagnosed Medullary thyroid carcinoma of lobe dextra.

Keyword: Medullary carcinoma, thyroid, sporadic, diagnosis.
CASE REPORT A RARE CASE OF NEUROENDOKRINE TUMOR IN DISTAL PANKREAS

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Background: Neuroendocrine tumors are a rare form of neoplasma which secreting hormones in variable clinical syndromes. Despite the relatively low incidence, NETS area clinical challenge because of varying clinical presentation and no effective initial imaging modalities.

Case description: The patient was a 46 year old was admitted with abdominal pain, icterus and loss of weight. Macroscopic’s examination showed tissue size 16x15x9,5 cm, bump, brownies, firm and rubbery. Resection of specimen show mass white, hemorrhage, necrosis and calcification. Microscopic’s examination showed the tumours are composed group of monoton malignant cell with round to oval nuclei with coarsely chromatin, hiperchromatic, prominent nucleoli, abundant and granular cytoplasm, and moulding. Infiltrating to hyperemic connective tissue of stroma. Mitoses 5/10 hpf.

Discussion and conclusion: Neuroendocrine tumors are a rare form of neoplasma and appear with various clinical variations. Diagnosis can be done with histopathology and immunohistochemistry. Difficulty in terms of action and high mortality due the almost all patient come in an advanced tumor state. Based on clinical examination, macroscopic, microscopic and immunohistochemical test, the patient was diagnosed Neuroendocrine tumors in distal pancreas.

Keywords: Neuroendocrine tumor (NETS), malignant, pancreas
CHILDHOOD SIGNET RING CELL CARCINOMA OF THE COLON:
A RARE CASE REPORT

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Background: Signet ring cell carcinoma (SRCC) of colon and rectum is a rare tumor, characterized by marked number of signet ring cells, accounting for 0.8% of colorectal carcinoma. SRCC predominantly occurs in adult and male population, only few cases are reported in children. This lesion has aggressive behavior, as it often presents with distant metastasis.

Case Description: A 15-year-old girl was referred to Sardjito hospital with chief complaint of recurrent abdominal pain and distension. She showed bowel habit change and weight loss since one year ago. Abdominal MSCT-scan and chest Xray demonstrated multiple inhomogenous lesions in sigmoid wall, size 10x10x11 cm, with ascites and pleural effusion. Colon biopsy revealed solid pattern growth, with abundant appearance of signet ring cells. Patient was diagnosed with signet ring cell carcinoma confirmed with positive staining of PAS and CK20. Unfortunately, total resection of tumor was unable to be performed since it was already metastasized to peritoneum.

Discussion and Conclusion: Based on WHO Classification, signet ring cell carcinoma should account for more than 50% of tumor cells to meet the diagnosis criteria of SRCC. Given the extreme rarity and non-specific signs and symptoms of SRCC, this tumor is unexpected to occur in children with advanced stage and higher tumor grade at presentation. SRCC in children has poor prognosis with median survival rate about 9 to 11 months. Therefore, early detection and careful histological examination play important role in improving the survival rates.

Keyword: Signet ring cell carcinoma, sigmoid colon, children.
COLON ADENOCARCINOMA, CRIBRIFORM COMEDO-TYPE

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Background: Colon adenocarcinoma cribriform comedo-type is rare tumour has extensive large cribriform glands with central necrosis, represent 1% of all colonic adenocarcinoma, in median age of 56,3 year.

Case Description: Women 60-years-old with 25 days history of pain in the lower right abdomen, the pain feels like hot and intermiten, constipation, nausea and vomitus. Gross description, intestinal tissue with length 15,5 cm, the mass 3 cm in diameter, reddish, white color, grows eksofitik into the lumen, 17 pieces of nodules. Histologic description, the mass consisting of a mucous layer coated with a columnar epithelial layer, goblet, groups of malignant cells with a round nucleus oval, pleomorphic, hyperchromatic, coarse chromatin, composed largely of cribriform and other forms of glandular structure, tunica serosa invasing, 6 lymph node metastasis and lymphangioinvasi.

Discussion: Colon adenocarcinoma Cribriform comedo-type is recognized by the WHO as a colorectal cancer subtype with morphologic features reminiscent of breast carcinoma in situ. Adenocarcinoma cribriform comedo-type are composed of expansile sheets of malignant glands with a fused growth pattern with a central area of comedo-like necrosis. In this case, we show extensive lymphovascular invasion, and lymph node metastasis. Surgical resection is generally required unless small tumour. Adjuvant therapy given for patients with lymph node metastases. Base on journal, 90% have >5 lymph node metastasis, 89% limphovascular invasion and subserosal, serosa invasion.

Conclusion: We here in reported a case of Adecarcinoma Colon Cribriform Comedo-type, based on the results of histopathologic examination.

Keywords: Cancer, colorectal, cribriform, gastrointestinal.
CELLULAR CONGENITAL MESOBLASTIC NEPHROMA: A RARE CASE OF MESENCHYMAL RENAL TUMOR

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Background: Congenital mesoblastic nephroma (CMN) is the renal tumour which accounts for 3–5% of all pediatric renal neoplasms. CMN is uncommon occurs more than two years and generally occurs before three months of age. The cellular variant tends to be more aggressive compare to the classic variant. The survival rate of the both variants is 85% and 100% respectively. The both variants show variable immunoreactivity of triple fibroblastic marker.

Case Description: A 2-years-old male child has an abdominal enlargement since the last three months. Ultrasonography examination showed a solid mass in right kidney, and the diagnosis of nephroblastoma was suggested. The patient underwent radical right nephrectomy. Gross examination showed a mass that extend from the renal cortex to the renal hilum, measuring 12.9 x 10.7 x 9.5 cm, with myxomatous-appearing cut surface, tan color, and some cystic parts. Microscopic evaluation showed a cellular tumor composed of sheet of small plump cells with vesicular nuclei and minimal cytoplasm. The tumor had expansile-pushing-border where it meets normal kidney. Immunohistochemical staining showed positivity of vimentin, and negativity of SMA, desmin, and CD34.

Discussion and Conclusion: Based on microscopic characteristics, CMN is divided into the classic, cellular, and mixed subtypes. This presented case is classified into the cellular subtype, which is the most common subtype (65%). However, this presented case is more suitable for the classic variant, because it has a bulging cut surface with area of hemorrhage and cystic degeneration. It is also very rare because the tumor cells are only positive for vimentin. It remains a diagnostic challenge for pathologists due to its similarity with other pediatric kidney neoplasms.

Keyword: congenital mesoblastic nephroma, classic, cellular, vimentin
GASTRIC NEUROENDOCRINE TUMOR: A RARE CASE REPORT

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Background: Gastric neuroendocrine tumor (gNET) is the uncommon neoplasm that may present with or without clinical symptoms. NETs of the stomach comprise about 0.1 - 0.6 % of all gastric cancers and represent about 7 - 8 % off all NETs. It arises from enterochromaffin-like cells of the stomach and is characterized by hypergastrinemia. The incidence has been increasing in recent decades. The widespread endoscopic screening and the increasing awareness of the neuroendocrine histology have contributed to the early detection of tumors. Prognosis of patients is better if the tumor is diagnosed at early stage.

Case Description: A 49-years-old woman complained difficulty of swallowing since the last two weeks. Endoscopy examination revealed Barret’s esophagus. Biopsy was done. Histopathological examination showed a tumor with the glandular patterns composed of cells with bland nuclei and salt and pepper chromatin. The tumor showed positive expression of chromogranin A and synaptophysin on immunohistochemistry analysis. The Ki-67 index was < 3 %. The diagnosis of gNET G1 was determined.

Discussion and Conclusion: Gastric neuroendocrine tumors comprise different subtypes with distinct management and prognosis. Correct management of patients with gNETs can only be proposed when the tumor has been classified by an accurate clinical and pathological evaluation. Immunohistochemistry examination with neuroendocrine marker is mandatory to rule out other mimicker neoplasm, such as gastric adenocarcinoma, particularly in small biopsy specimens. Ki-67 labeling index is important to determine the grade of the tumor.

Keyword: gNET, synaptophysin, chromogranin
INFLAMMATORY MYOFIBROBLASTIC TUMOR COLON: A RARE CASE REPORT

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Background: Inflammatory myofibroblastic tumors (IMTs) also known as inflammatory pseudotumors or inflammatory fibrosarcomas, are uncommon mesenchymal tumors composed of myofibroblastic spindle cells admixed with lymphocytes, plasma cells and eosinophils. This tumor has aggressive behavior and recurrence tendency. It is commonly reported in the lungs and it can be present in extrapulmonary sites including GIT as shown in this case.

Case description: A 38 year old woman presented with acute abdominal pain and anemia. Radiologic examination indicated ileus paralytic. Histopathological examination revealed fatty tissue and connective tissue with the proliferation of dense spindle cells infiltrating the muscular layer, lymphocytes, multiple PMN leukocytes and plasma cells with bleeding areas, blood vessel dilation and extensive necrosis.

Discussion and conclusion: Inflammatory myofibroblastic tumor is a rare neoplasm that most commonly found in the pulmonary system. The most frequent sites of extrapulmonary inflammatory myofibroblastic tumor is colon. Patients with IMTs in the GI tract usually have non specific symptoms, such as anemia, abdominal pain. IMTs in the colon and rectum present the same clinicopathologic features as in colorectal carcinoma. Histopathological examination is a way to distinguish it and immunohistochemistry important to confirm diagnosis. Complete surgical resection is considered the treatment of choice for IMTs.

Keyword: Inflammatory myofibroblastic tumor (IMT), colon
LACRIMAL GLAND ADENOID CYSTIC CARCINOMA

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Background: Adenoid Cystic Carcinoma (ACC) is rare tumor type, grows slowly malignancy of the secretory glands with a prolonged clinical course. Base on the data, ACC rises in the eye account for only 1.8% of total patients, among who the lacrimal gland is most commonly involved in over 80%. Due to the malignant behavior and complex orbital anatomy location of the tumors, early detection and complete resection are very difficult, which results in frequent local recurrence and outcome poorly. Given the rarity of ACCs in the lacrimal gland, very little has been published on this disease.

Case description: We report the case a 14-years-old girl admitted with one year history of increased periorbital pressure and progressive swelling of her left eye. On gross description, the specimen consisted of brownish, rubbery, 4x2x1.7 cm and 0.5 cm in diameter. On histologic description, showed basaloid cell with round to ovoid nuclei, pleomorphic, hyperchromatic, formed tubular and structured cribriform.

Discussion: Adenoid cystic carcinoma generally affects adults, but can arise in children. Patients with adenoid cystic carcinoma of the lacrimal glands present with histories of eye-related symptoms such as pain, disturbed motility. The majority of lacrimal gland adenoid cystic carcinomas are high grade phenotype which translate into a more aggressive clinical course and shorter median survival of only 2.5 years compared to other sites of origin. Indeed, even with aggressive therapy, recurrence rate is as high as 75 percent.

Conclusion: We herein reported a case of Lacrimal gland adenoid cystic carcinoma, based on the results of microscopic and histopathologic examination.

Keyword: Adenoid cystic carcinoma, lacrimal gland
Background: Lipoblastoma is a rare benign mesenchymal tumor of embryonal fat, comprising of adipocytes and lipoblasts. It occurs in infants and young children (between 5 days to 6 years). It may attain large size and cause compression symptoms, especially if located near the spinal cord, presenting with neurological symptoms.

Case Description: A 1-year-old female child complained of a fast-growing mass on the back of the head or occipital region, mobile, and no pain. She was in surgery at a regional hospital. Macroscopically, a mass of 2x1.5x1 cm was found, capsulated, white-tan in color, and rubbery. Microscopically, the tumor showed restricted connective tissue and a myxoid background, with cells having centrally hyperchromatic small nuclei and abundant vacuolated cytoplasm, making mitosis difficult to find.

Discussion & Conclusion: Based on clinical and histopathological findings, the patient was diagnosed with lipoblastoma. It can be mistaken for well-differentiated liposarcoma, rhabdomyosarcoma, and lipoma in frozen sections. Lipoblastoma is definitively treated by complete resection. Recurrence rates range from 13% to 20%. The prognosis is excellent, depending on the size of the tumor and local invasion.

Keyword: Lipoblastoma, infant, and young children
METAPLASTIC BREAST CARCINOMA WITH CARCINOSARCOMA DIFFERENTIATION: A RARE CASE REPORT WITH REVIEW OF LITERATURE

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**Background** : Metaplastic breast carcinoma (MBC) with carcinosarcoma differentiation is a rare entity malignancy and accounting for less than 1% of all breast carcinomas, which is often composed of epithelial and mesenchymal components within the same tumor. It has usually aggressive clinical behavior and poorly prognosis with triple negative receptor status and is characterized by a rapid increase in size. The majority are with high grade and larger in size than epithelial breast cancer.

**Case Description** : A 69-year-old post menopause woman presented with a lump in the right breast with rapid growth in two months. The fine needle aspiration cytology was revealed a diagnosis of malignant phylloides tumor. The mass 7x7x4.5 cm in size was totally resected and histopathological examination showed MBC with carcinosarcoma differentiation. Ki67 proliferation index was found 40%. Tumor cells were positive for cytokeratin and vimentin, and negative for ER, PR, Her2.

**Discussion** : The clinical and pathologic features of MBC are important to distinguish this rare tumor from other types of uncommon breast malignancies. The origin of MBC is still unclear. Carcinosarcoma shows the myoepithelial origin and histopathologically, consists of both carcinomatous and sarcomatous components. Immunohistochemistry examination is mandatory to determine the definitive diagnosis.

**Conclusion** : MBC is a rare case among breast carcinomas. The diagnosis of MBC is difficult in some cases and immunohistochemistry is necessary to rule out other malignancies. Obtaining an accurate diagnosis of MBC is essential in order to choose the best treatment.

**Keyword** : MBC, carcinosarcoma, immunohistochemistry, triple negative, poorly diagnosis
Background: HPC are rare soft tissue neoplastic lesion that can arise in all of part the body. They are mesenchymal tumors that account for 3-5% of all soft tissue sarcomas and 1% of all vascular tumors. They originate in extravascular cell (pericytes). The adult ranged from 18 to 70 years and diameter of tumors range 1-20 cm. These tumors generally develop in the limbs, pelvis, head and neck, and most frequencies in muscle tissue. Surgery remain the mainstay treatment. Prognosis worse in adult type. Late relapses may occur by incompleting resection and require for long term follow up.

Case description: A 20-year-old man complained a connective tissue mass, swelling and no pain on antebrachii dextra region. MSCT revealed inhomogen solid mass on region distal antebrachii dextra which measured (AP 4.7x CC 5.28x LL 4.35 ) cm. Gross: lobulated, brown, firm and circumscribe mass measure (8.5x6.5x5 ) cm. Histopathologic: the specimen contain a group of malignat cells with oval round shape, pleomorphic, hyperchromatic, rough chromatin, prominent nucleotide, atypical mitoses, separated by thick binding tissue septa with fibrovascular stalk, including small cleft of blood vessels with pericyctic pattern. CD34 (+), EMA(+), SMA(+) and Ki67(+) >30% with Immunohistochemical show positively.

Discussion: HPC is solitary fibrous tumor. HPC is fibroblastic mesenchymal neoplasm characteristically featuring a prominent branching staghorn vascular pattern. There are 2 type: infantile and adult. There is no gender prelilection. The etiology undescribed, it’s associated with trauma, long time steroid consumption, pregnancy and hypertensive. Survival rate is about 2-5 years (86%-93%).

Conclusion: Based on pathological examination, Immunohistochemistry, clinicy condition, MSCT feature, malignant hemangiopericytoma was rendered.

Keyword: Hemangiopericytoma, vascular tumor, MSCT
METASTASIS OF HEPATOCELLULAR CARCINOMA IN MANDIBLE, A VERY RARE CASE REPORT

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Background: Hepatocellular carcinoma (HCC) is the most common malignancy in liver, and one-thirds of HCC will metastasize frequently to the lungs. HCCs is extremely rare to metastasize to the oral cavity region. HCC with oral cavity metastasis has poor prognosis because of impeding diagnosis. Common cancer to metastasize to the oral cavity are usually from bone, lungs, breast and kidney. Metastatic malignancies in oral cavity are very rare, accounting for only 1–4% of all oral malignancies, which may occur in the jaw bones, soft tissues or both. Up to our knowledge, this is the first case of metastasis of HCC in mandible to be reported in Indonesia.

Case Description: A 67-year-old male presented with painful right mandible mass for 2 weeks. Three months prior to hospital admission, patient was diagnosed with Hepatocellular Carcinoma (HCC) based on MSCT and laboratory result, showing 10 cm diameter of inhomogeneous mass in liver and high serum AFP (923.80IU/L). Histopathological examination as gold standard of diagnosis was not performed. Current imaging result revealed another destructive mass in right mandible, size 6.9 x 5.07 x 3.5 cm. Mandible mass resection was performed and revealed malignancy with pleomorphic polygonal cells arranged in trabecular pattern, infiltrating surrounding fibrous tissue and lamellar bone, suggesting metastasis of HCC. Immunostaining of glypican and AFP confirmed the diagnosis as it showed strong expression in tumor cells.

Discussion & Conclusion: The valve less Batson s paravertebral plexus (BPP) is the pathway for distant metastasis into the oral cavity. The spread of HCC from the liver to the mandible has occurred bypassing the lungs, via the Batson s plexus. HCC clinically appears as a tumor mass in the oral cavity may mimic an odontogenic tumor. Histologically, metastatic lesion may comprise of strandslike patterns composed of cells resembling hepatocytes. IHC markers are useful to establish diagnosis and confirm the microscopic diagnosis. Early diagnosis of metastatic oral lesions is quite challenging because patients may come to oral physician first for treatment and need sequential investigations to detect primary lesion.

Keyword: Hepatocellular carcinoma, mandible mass, immunostaining, oral metastasis
C15

METASTATIC SIGNET RING CELL CARCINOMA WITH NEGATIVE RAS AND RAF PROFILE IN 10-YEAR-OLD BOY: POSSIBILITY OF ANTI-EGFR USE

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Background: Primary childhood gastrointestinal malignancy are rare entities, less than 5% of all pediatric neoplasms. The most often types are lymphoma, colorectal carcinoma (CRC), and carcinoid tumors. Colorectal carcinoma is rarely diagnosed in children, therefore remains unsuspected. Delay in diagnosis and advanced stage of disease lead to poor prognosis.

Case Description: A 10-year-old boy was referred to Sardjito Hospital for abdominal wall mass. In 2016 he complained of vomiting, abdominal pain, and mass, diagnosed as appendicitis. Appendectomy was performed, albeit two weeks after, the mass persisted. Second exploratory surgery discovered colonic mass of which histopathology revealed signet ring cell carcinoma (SRCC). Subsequent chemotherapy regimen was prescribed. In 2017, third exploratory surgery of abdominal wall mass revealed signet ring cell histology as metastatic spread. Ancillary tests with CK20 confirmed strong expression in tumor cells with negative RAS nor RAF mutation.

Discussion and Conclusion: Childhood SRCC is rare, with poor prognosis due to its aggressive behavior. The majority of SRCC occur as primary tumor in stomach. Colorectal SRCC commonly occur in adults, median age of 59 years. We present SRCC in 10-year-old boy spreading to abdominal wall after chemotherapy. Immunohistochemical staining with CK20 confirmed colorectal primary site. Negative RAS and RAF testing do not necessarily indicate different tumor behavior but better for therapy. Anti-EGFR therapy is possible for such cases, even in pediatrics. The diagnosis of CRC should be considered in children with acute abdominal signs for early diagnosis and eventually improve prognosis.

Keyword: Signet ring cell carcinoma, colon carcinoma, childhood malignancy, RAS-RAF
Background: Neuroendocrine neoplasms are neoplasm arising from neuroendocrine cells or neurosecretory cells of neural crest origin, characterized by the presence of neurosecretory granules often producing biogenic amines and hormones. Neuroendocrine neoplasms are considered rare, annual incidence of these tumors is approximately 6.5 - 5 per 500,000. Most commonly occur in the gastrointestinal tract (30.4%), in the lung (25%) and other parts of the body (13.7%). Primary soft tissue NEC is excessively rare.

Case Description: 4-years-old boy, with enlarged mass quickly growing at the right gluteus, look anorexic, anemic and dyspeptic. MSCT shown gluteal mass with destruction to the sacrum and multiple para aortic lymphadenopathy and multiple nodule on the thoracic vertebrae. The clinician diagnosed as rhabdomyosarcoma. Histopathological examination showed round to oval, spindle and bizarre nuclei, coarse chromatin, some with moulding nuclei, with scanty cytoplasm, plenty of mitosis (25/10HPF). Immunohistochemistry stain showed positive results for Chromogranin, Synaptophysin, and negative results for CK, Desmin and CD99.

Discussion and Conclusion: Neuroendocrine carcinoma referred to neoplasm with high mitotic index (>20) and high proliferation index (Ki67 >30%). In this case we found 4 years old boy with gluteal mass. The histopathology consistent with High Grade neuroendocrine Carcinoma with differential diagnosis was Rhabdomyosarcoma. The immunohistochemistry stain (Chromogranin, Synaptophysin, Ki67, CK, Desmin and CD99) revealed that it was a High Grade Neuroendocrine Carcinoma.

Keyword: Neuroendocrine Carcinoma, Neuroendocrine Soft Tissue
POSSIBLE PROGRESSION OF OLIGODENDROGLIOMA TO ANAPLASTIC OLIGODENDROGLIOMA: A CASE REPORT

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Background: Anaplastic Oligodendroglioma (AODs) WHO grade 3 are uncommon case. Oligodendrogliomas (OD) gradually become more anaplastic and progress from low-grade glioma into high-grade glioma with anaplastic features. The morphologic changes, which are characteristic of high-grade glioma, appear gradually within a glioma, the exact delineation of low- and high-grade (or anaplastic) oligodendroglioma is unclear. OD may also present as anaplastic tumors, without clinically manifest low-grade precursor lesion. AODs composing approximately 1.2% of all primary brain tumours. In population-based series, 20–35% of oligodendrogial tumours are AODs. This tumors occur most commonly in adults, the peak age of onset is 35 to 44 years.

Case Description: We report a 45-year-old male complaining headache and seizure. CT imaging revealed mass at the left frontal lobe. Patient was referred to Sardjito Hospital, subtotal resection of the mass performed, gross examination showed ±7 cc, white tan, fragmented tissue, with soft consistency. Histopathologic features revealed tumor cell with fried egg appearance, hyperchromatic nuclei, vascular proliferation, and numerous mitosis. Immunohistochemical examination revealed AODs.

Discussion and Conclusion: AODs are diffusely infiltrating, well-differentiated glioma of adults, typically located in the cerebral hemispheres, composed of neoplastic cells morphologically resembling oligodendroglia and often harbouring deletions of chromosomal arms 1p and 19q, with focal or diffuse histological features of malignancy and a less favourable prognosis. Our case shows histopathology pattern and immunohistochemical staining positive for GFAP and Ki67, thus the diagnosis of AODs was confirmed.

Keyword: Anaplastic Oligodendroglioma; GFAP; Ki67
PRIMARY MALIGNANT MELANOMA OF THE BREAST

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**Background:** Malignant melanoma of the breast has four predominant manifestations: 1) Primary malignant melanoma of the breast skin; 2) malignant melanoma metastasis to the breast; 3) in transit metastases to breast tissue and skin; and 4) primary malignant melanoma of the breast gland. Primary malignant melanoma of the breast gland is considerably rare. The incidence is <5% of all melanomas and <0.5% of malignant breast tumors.

**Case Description:** A 36 years old woman presents with right breast lump. Physical and radiological examination suspicious for hemangioma. There was no lymphnode enlargement and other lesion detected. Macroscopic examination showed 12x10x1.5-2 cm encapsulated firm mass. Cut surface showed white tan mass with brown patches. On microscopic examination, those brown patches proven as tumour nests, arranged in solid and trabecular nests, infiltrated into surrounding tissues. Tumour cells were polymorphic, with coarse chromatine and a lot of brown pigment in the cytoplasm. Immunohistochemistry (IHC) analysis of S100 and HMB45 were positive.

**Discussion and Conclusion:** Diagnosis of primary malignant melanoma of the breast require carefully observation of the clinical pathological features and immunohistochemical staining methods. Surgical resection is the commonly adopted treatment method for malignant melanoma, be equipped by chemo, radio and immunotherapy treatments resulting in a comprehensive treatment strategy. Due to the fact that the tumor was completely resected and there was no lymphnode enlargement and other lesion detected, no adjuvant therapy was necessary based on guidelines’ recommendations.

**Keywords:** Malignant melanoma, breast, primary, S100, HMB45
Blastomycosis is a chronic granulomatous and suppurative mycosis caused by the fungus Blastomyces dermatitidis. Primary cutaneous Blastomycosis is rare and occurs following direct inoculation of the organism into the skin. Secondary cutaneous lesions occur in the course of disseminated disease. We report a case of cutaneous blastomycosis from 58 years old men with no evidence of systemic involvement. He was a farmer which frequent soil contact. Multiple lesion on upper extremity presents as verrucous nodules, ulcerated plaques and widespread pustular eruptions. Clinically, diagnosed as Tuberculosis verrucosa with differential diagnosed as Chromoblastomycosis, Blastomycosis, Lupus vulgaris, Morbus Hansen and Squamous cell carcinoma. Skin biopsy specimen was stained with hematoxylin and eosin, periodic acid-Schiff staining (PAS) and Fite-Faraco Staining (FF). Histopathologic examination showed pseudoepitheliomatous hyperplasia and a granulomatous inflammation with round to oval organisms, with refractile cell walls in the cytoplasm of giant cells. PAS staining showed Blastomyces organisms. FF staining was negative. Radiological examination of the patient showed no evidence of systemic involvement. Our case may represent the rare primary cutaneous inoculation blastomycosis which frequent soil contact as risk factor. Clinically, this case was not specific. Histopathology with histochemistry examination made it clear.

**Keyword:** Skin, Blastomycosis, histopathology, PAS, FF
Recidive of Papillary Thyroid Carcinoma with BRAF Status Mutation in Juvenile Boy

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Background: Papillary thyroid carcinoma (PTC) is the most common malignant neoplasm of the thyroid, comprising about 80% of all thyroid cancers. It occurs in all ages, including children and reaches the incidence peak in the third to fourth decade. Thyroid cancer occurs more in female compared to male. Some of the risk factors include exposure to radiation, genetic factors and nodular hyperplasia.

Case presentation: A 12-year-old boy was presented with a lump in the left neck since three months before. He was diagnosed with PTC 2 years ago and underwent ablation therapy. Neck ultrasound-guided FNA showed high cellularity cells with polymorphic cells and ground glass nuclei that are of PTC characteristics. The molecular examination showed BRAF mutation.

Discussion: BRAF gene mutation may cause PTC by creating aberrant activation. BRAF mutation may be associated with aggressive character in PTC, reducing differentiation of the cancer and radioactive iodine (RAI) retention capacity by decreased expression of the sodium-iodide symporter.

Conclusion: BRAF mutation is a criterion for tumor aggressiveness in PTC studies.

Keyword: Juvenile boy, papillary carcinoma, BRAF mutation, FNAB
RECTAL MIXED ADENONEUROENDOCRINE CARCINOMA: A RARE CASE REPORT

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Background: Mixed adenoneuroendocrine carcinoma (MANEC) is a rare malignancy of gastrointestinal tract, composed from dual morphologies: adenocarcinomatous and neuroendocrine differentiation, with each component representing at least 30% of the tumor. Diagnosis is mainly based on the specific dual tumor architecture, being supported by the immunostains specific for neuroendocrine markers (chromogranin, synaptophysin, CD56, NSE) combined with non-endocrine differentiation markers (CK20, CK7, CDX2, CEA). Due to its rarity, few aspects regarding the origin and preferred therapeutic modalities are known.

Case description: A 61-years-old female was admitted to the hospital with symptoms representing rectal obstruction. Rectal biopsy was performed and histopathological examination revealed epithelial tumor that infiltrated until muscular layer. Two population of tumor cells were observed; atypical large cells with vacuolated cytoplasm and prominent nuclei arranged in tubular pattern, and less atypical small cell with bland chromatin arranged in solid pattern. Immunostaining was performed to further differentiate the dual tumor architectures. Tumor with tubular pattern was positively stained with CK20, indicated adenocarcinomatous component. Solid pattern part was stained with chromogranin, P40 and P63 to distinguish neuroendocrine and basal cell differentiation, and it demonstrated positive expression of chromogranin, indicated neuroendocrine carcinoma. Thus, the case was diagnosed with MANEC.

Discussion and Conclusion: MANEC is frequently occur in woman, with majority of the cases present with an aggressive behaviour and a high risk for liver metastasis. Some reports suggest that clinical behaviour of MANEC depends on the grade of the neuroendocrine component, however some of them reveal that the characteristics of adenocarcinomatous part influence the outcome in well-differentiated neuroendocrine components. In our case, it is also occurred in female and showed aggressive behaviour even though metastasis is not yet detected. Identification of the neuroendocrine components have therapeutic relevance, therefore a very attentive evaluation may warrant a better outcome and early detection of distant metastases.

Keyword: MANEC, adenoneuroendocrine, rectal carcinoma
RECTOSIGMOID ENDOMETRIOSIS CLINICALLY MIMICKING COLORECTAL MALIGNANT TUMOUR: A RARE CASE REPORT

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Background: Gastrointestinal endometriosis is relatively rare, around 3.8–37%; its differentiation from malignancy is often difficult. Cases of colon endometriosis were only 3% of all endometriosis cases.

Case Description: We report a case of rectosigmoid endometriosis that clinically mimicking malignant tumour in gastrointestinal tract. A 38-year-old woman was referred to Surgery Department with a suspected of malignant tumour in rectosigmoid. Her chief symptoms were bloody slimy stool with abdominal pain. Colonoscopy showed an intraluminal mass in rectosigmoid, the biopsy shown proctitis. She was undergone a laparoscopic anterior resection; during operation the mass was thought as malignant tumour in rectosigmoid with infiltration to left ovary. Rectosigmoid endometriosis was diagnosed pathologically based on the endometrial stromal and glands that are found in rectosigmoid tissue, confirmed with immunohistochemistry, i.e positive ER and CD10 in endometrial stroma with positive ER and CK7 in endometrial glands. The histopathology examination of the left ovary sample also showed an endometriosis of left ovary.

Discussion & Conclusion: A clinical diagnosis of gastrointestinal endometriosis is often difficult because the symptoms, radiological findings and the view in endoscopy mimics malignant tumour in gastrointestinal tract. Biopsy sometimes gives unsatisfied result based on the location of specimen sampling. This case gives some consideration of the theory of endometriosis’ origin, whether the regurgitation, benign metastases, metaplastic or extra uterine stem theories. We can conclude that endometriosis in gastrointestinal tract could give symptoms mimicking malignant tumour in gastrointestinal tract. Histopathology examination is important, may be followed by immunohistochemistry test in misdoubt cases.

Keyword: Rectosigmoid endometriosis, colon endometriosis, bowel endometriosis
ROLE & PITFALL OF IMMUNOHISTOCHEMISTRY IN DIAGNOSING SMALL ROUND BLUE CELL TUMOR: LESSON LEARNED FROM DIFFICULT CASE OF EXTRASKELETAL EWING SARCOMA PREVIOUSLY DIAGNOSED AS T CELL LYMPHOMA

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Background: Immunohistochemistry (IHC) has a pivotal role in diagnosing small round blue cell tumor. Accuracy of immunohistochemistry staining is very important to establish diagnosis & decide therapy.

Case Description: We present a case of extraskeletal Ewing sarcoma arising in right medial ankle of 17 years old boy. Morphological analysis from biopsy specimen revealed small round blue cells mimicking non-Hodgkin lymphoma. Patient was referred to Sardjito hospital. Immunohistochemistry staining from previous specimen was positive for CD3, and negative for CK & CD20. The patient underwent chemotherapy regimen for T cell lymphoma for several months, but the mass got bigger. Immunohistochemistry staining of CD3 was repeated and showed ambiguous staining pattern. Clinicopathological conference was held and suggested to repeat the biopsy & process the specimen with highest standard to minimize false diagnosis. Latest histopathological specimen showed sheets of densely packed monotonous round cells, with scanty cytoplasm, indistinct cell membranes, round, vesicular nuclei with irregular nuclear contours, coarse chromatin & inconspicuous nucleoli. Mitoses can be seen. Immunohistochemistry from latest specimen showed positive staining for CD99, whereas negative for LCA, CK, S100, synaptophysin, desmin, CD5. Finally, diagnosis of Ewing sarcoma was established.

Discussion & Conclusion: Despite its advantage, immunohistochemistry staining from substandard specimen can be confusing. Preanalytical, analytical, and postanalytical phases should fulfill quality assurance standard.

Keyword: Immunohistochemistry, Pitfall, Small round blue cell tumor, Extraskeletal Ewing sarcoma
SMALL CELL NEUROENDOCRINE CARCINOMA OF LARYNX: A CASE REPORT

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**Background:** Laryngeal carcinoma is the second most common head and neck cancer after oral cancers. There are 4 different types of laryngeal neuroendocrine tumours, consist of paraganglioma, typical carcinoid, atypical carcinoid tumor and small cell neuroendocrine carcinoma. Small cell neuroendocrine carcinoma have poor prognosis, with 5 year survival rates of 5%. It is difficult to distinguish between neuroendocrine carcinoma with squamous carcinoma.

**Case description:** We report a 68-year old man with hoarseness, hemoptysis and collidextra mass. Endoscopic examination showed larynx mass. Patient was referred to Dr Sardjito hospital for further treatment. Macroscopic showed fragmented tissue +/-3 cc, white tan. Histopathology examination revealed solid tumours arranged of small pleomorphic cells with scanty cytoplasm, round to spindle nuclei, coarse chromatin with salt and pepper features and numerous mitoses were observed. Immunohistochemical staining examination showed expression in chromogranin, synapthophysin, and NSE.

**Discussion and Conclusion:** In this case diagnosis of small cell neuroendocrine carcinoma was established by histopathological and immunohistochemical examination. To distinguish squamous carcinoma with small cell carcinoma using immunohistochemical staining, which P40 stain not express, NSE, Synapthophysin and Chromogranin are positive.

**Keyword:** Keywords: Small cell neuroendocrine carcinoma, larynx, immunohistochemical.
SPINDE TYPE NEUROENDOCRINE OF MULTIPLE METASTATIC RECTAL CARCINOMA: A RARE CASE REPORT

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Background: Rectal neuroendocrine carcinoma (NEC) is a rare, poorly differentiated neoplasm which belongs to the poorest prognostic subgroup among primary colorectal neoplasms. Diagnosis based on clinical clues are challenging since tumor can be present in various organs and difficult to distinguish from other rectal tumors especially when the morphology can resembles other entity. NEC demonstrate aggressive clinical course and commonly metastasize to lymph nodes, liver, and bone.

Case Description: A 62-year-old female presented with anal bleeding, altered bowel habits, and weight loss for the past two months. Computed tomography scan of the chest, abdomen, and pelvis revealed multiple masses in the rectum, liver, and lung. Biopsy of rectal, liver mass and mesorectal lymph nodes was performed. Histopathology of both masses identified solid tumors composed of polymorphic mostly spindle cells showing salt and pepper features, extensive necrosis, with mitotic index more than 20/10 HPF. Subsequent immunohistochemistry with chromogranin A and synaptophysin stained positive on tumor cells with Ki-67 labeling index (LI) of 52%.

Discussion & Conclusion: Histopathology examination of the masses exclude Poorly Differentiated Adenocarcinoma but difficult to distinguish with Hemangioma Pericytoma so Chromogranin A and synaptophysin staining established neuroendocrine origin of the tumor as well as confirm presence of metastases in liver and mesorectal lymph nodes. Mitotic count is essential to determine tumor grade. High Ki-67 LI of this case indicates poor prognosis. Ki-67 LI is recommended as an objective classification tool and prognostic factor. We report a case of spindle type rectal neuroendocrine carcinoma with multiple metastases.

Keyword: Neuroendocrine neoplasms, Ki-67, Rectal tumors, metastases
THE ROLE OF RAPID ON-SITE EVALUATION (ROSE) WITH CYTOHISTOPATHOLOGICAL CORRELATION IN DIAGNOSIS OF CHOLANGIOCARCINOMA: AN EFFORT TO IMPROVE DIAGNOSIS ACCURACY AND ADEQUACY

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**Background:** Cholangiocarcinoma is a malignancy from cholangiocytes and can be arise from different anatomical location. Early detection of cholangiocarcinoma is difficult, because its variable clinical manifestation’s and may go unnoticed until late stages. The diagnosis of cholangiocarcinoma can be a challenge only with ultrasound-guided core needle biopsy because the specimen adequacy from this procedures still undetermined. Rapid on-site evaluation (ROSE) is useful technique to rapidly assess the adequacy material obtained by core needle biopsy.

**Case description:** A 33-year old man with liver enlargement and multiple nodules suspicious for malignancy on abdominal ultrasound, Computerized Tomography (CT) scan and Possitron Emission Tomography (PET) scan. Core needle biopsy was performed with ultrasound-guided and ROSE, and then cytomorphology revealed some clusters of cholangiocarcinoma cells. The histopathology also finding the same tumour structure.

**Discussion and conclusion:** ROSE can help to confirm the histopathology diagnosis for ultrasound guided core needle biopsy on cholangiocarcinoma, because its cytomorphology findings. ROSE also can reducing the number of repeated procedure for nondiagnostic specimen because its specimen adequacy assessed rapidly.

**Keywords:** Cholangiocarcinoma, Rapid on-site evaluation, Ultrasound guided core needle biopsy
THE USE OF FINE NEEDLE ASPIRATION CYTOLOGY SPECIMEN FOR DETERMINING PROGNOSIS IN THE CASE OF HEPATOBLASTOMA: AN APPLICATION OF microRNA PROFILING (miR-122, miR-195, miR-210, miR-214, and miR-221) AS A BIOMARKER

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**Background:** Liver cancers are rare in children, representing only 1.1% of malignancies, incidence rate of 1.5 cases per million. Deregulated expression of miRNAs has been showed to contribute to carcinogenesis. miRNA profiling is a potential use as a prognostic marker in hepatoblastoma (HB). It has been known that expression of miR-122, miR-195, miR-210, miR-214 and miR-221 are able to predict the progress of HB.

**Case description:** An 8-month-old boy, with an enlarged and palpable stomach. Radiology examination found solid cystic mass in retroperitoneal inferolateroanterior from ren dextra that suggestive for hepatoblastoma. Ultrasound guided FNA liver showed high cellularity of round-poligonal cells with rosette formation. Scrapping cells from slide was performed, subsequently miRNA extraction was performed. A quantitative RT-PCR showed over expression of miR-122, miR-195, miR-210, miR-214 and miR-221 compared to internal control. The expression of thoses microRNA correlated with disease progression and poor prognosis of HB.

**Discussion and conclusion:** In this case, profil of miR-122, miR-195, miR-210, miR-214, and miR-221 showed over expression. This miRNAs can be proposed to be a biomarker of disease progression dan poor prognosis in HB.

**Keyword:** Hepatoblastoma, FNAB examination, over expression miRNAs, cytology specimen
UROTHELIAL CARCINOMA WITH GLANDULAR DIFFERENTIATION: A HISTOPATHOLOGICAL CHALLENGE OF UNUSUAL VARIANT

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Background: Urothelial carcinomas are the commonest neoplasm of the urinary bladder. Many variants of urothelial carcinoma have been described. Urothelial carcinoma with glandular differentiation is difficult to distinguish from other tumors such as prostate adenocarcinoma. Distinguishing these malignancies is necessary due to the therapeutic and prognostic purpose. We describe an rare case of urothelial carcinoma with glandular differentiation along with its immunohistochemical profile arising in elderly male.

Case Description: A 63-year-old man complained of back pain and history of hematuria, urinary retention, and weight loss of 20 kg. He had history of transurethral resection of the prostate (TURP) for three times and a bladder urothelial carcinoma. He had received chemotherapy for eight times and referred to our hospital for radical cystectomy. MSCT showed bladder carcinoma that infiltrates the prostate. Histopathological features showed solid tumors with tubular gland formation infiltrating surrounding connective tissue. The cells were polymorphic, with partially vacuolated cytoplasm, and prominent nucleoli. The tumor expressed CK7 and p63, but did not express CK20. Histopathological features and immunohistochemistry profile were consistent with the diagnosis of urothelial carcinoma with glandular differentiation.

Discussion and Conclusion: The presented case highlights that urothelial carcinoma with glandular differentiation is an aggressive variant that should be separated from the common mimicking lesions such as prostatic adenocarcinoma owing to its poor prognosis. Distinguishing these malignancies is morphologically difficult and relies on immunohistochemical staining. In immunohistochemistry staining, urothelial carcinoma usually shows the positive result for CK7, CK20, and p63, whereas prostatic adenocarcinoma shows the negative result for CK7, CK20, and p63.

Keyword: urothelial carcinoma, glandular differentiation, prostatic adenocarcinoma, p63
VARICELLA MIMICKING BULLOUS PEMPHIGOID IN IMMUNOCOMPROMISED PATIENT

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**Background:** Varicella is characterized by a disseminated vesicular eruption which is varying stages are present at any one time. Children generally most susceptible. In the absence of a vaccination programme, varicella affects nearly every person. More severe symptoms tend to occur in immunocompromised patient.

**Case description:** A 15 year old male patient, presented with blisters on his face, lip, palate, head, trunk, abdomen, and extremities, since three days before admitted to the hospital. The patient had craniotomy surgery for meningioma ten days before, and given acetaminophen and cephadroxyl as a home medicine after surgery. Skin biopsy from back and thigh region was performed.

**Discussion and Conclusion:** Methylprednisolon was given to the patient during hospitalization. The immune system contributes to the severity of the disease. On physical examination, there were tense blisters in erythematous base, hyperpigmentation macules, erosions, and crusts. The blisters measure 0.3 up to 1 centimeters in diameter. Microscopically, epidermal layer with keratinized complex squamous epithelium, intraepidermal bullae, subepidermal bullae, and intranuclear inclusion bodies. Perivascular and periadnexal inflammatory infiltrates of lymphocytes, histiocytes, neutrophils, and eosinophils were seen. This patient was diagnosed as vesicobullous skin lesion caused by varicella infection.

**Keyword:** varicella, intraepidermal bullae, subepidermal bullae, inclusion bodies
METASTASIS DETECTION OF RECTAL NEUROENDOCRINE CARCINOMA IN THE BONE

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Background: Poorly differentiated neuroendocrine tumors (NET) are rare tumors with incidence between 0.1% and 3.9% of all colorectal malignancies. These uncommon tumors are highly aggressive since most patients developing metastatic disease at early stage of disease. Lack of effective therapy of the disease also leads to poor prognosis.

Case Description: We report a case of a 65-year-old female presented with history of pain and lumps in right upper arm and left breast. Needle aspiration on the humerus showed atypical cells, suggesting a metastazised malignancy. Series of radiographical examination revealed multiple masses in right humerus, breast, lung, and rectum. Sigmoidoscopy confirmed a partially obstructing rectal mass, located 3 to 8 cm from anal verge. Biopsy of bone and rectum were performed and consistently revealed neuroendocrine carcinoma. Immunostaining of chromogranin A, synapthophysin, and CD56 of both samples showed strong positivity, confirmed the histopathological diagnosis. The tumor was classified into grade 3 or poorly differentiated neuroendocrine carcinomas since the Ki-67 index was >20%.

Discussion & Conclusion: Rectal neuroendocrine carcinomas are rare and have a significantly worse prognosis than adenocarcinomas. Higher stage and metastatic disease are likely to be found at time of diagnosis. It is important to distinguish poorly differentiated neuroendocrine carcinomas from adenocarcinomas histopathologically due to its benefits from alternative cytotoxic chemotherapeutic regimens.

Keyword: Neuroendocrine carcinoma, rectum, immunostaining, metastasis
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ASPEK HUKUM DAN ETIKA PROFESI AHLI TEKNOLOGI LABORATORIUM MEDIK DALAM TATA LAKSANA PEMERIKSAAN SAMPEL

Yanuar Amin¹

ABSTRAK


Kata kunci: ahli teknologi laboratorium medik, etika profesi, aspek hukum, fasilitas pelayanan kesehatan

¹ Sekretaris Jenderal DPP PATELKI 2017 – 2021
PERAN DAN TANGGUNG JAWAB ATLM DI LABORATORIUM PATOLOGI ANATOMI

Bowo Yuniarto

ATLM Laboratorium Patologi Anatomi CITO Yogyakarta

Menurut Peraturan Menteri Kesehatan Republik Indonesia Nomor 42 Tahun 2015 tentang Izin dan Penyelenggaraan Praktek Ahli Teknologi Laboratorium Medik, bahwa seorang ATLM mempunyai kewenangan melakukan pemeriksaan dalam bidang hematologi, kimi klinik, imunologi, imunohematologi, mikrobiologi, parasitologi, mikologi, virologi, toksikologi, histoteknologi, sitoteknologi.


ATLM mempunyai peran dan tanggung jawab yang besar dalam kegiatan pelayanan di laboratorium Patologi Anatomi dari proses Pra analitik, analitik, sampai pasca analitik. Dengan membuat sediaan yang baik dan berkualitas, maka akan memudahkan dokter spesialis Patologi Anatomi dalam menegakkan diagnosis PA dengan tepat. Hasil diagnosis ini akan digunakan oleh Klinisi untuk menentukan arah dan tindakan selanjutnya terhadap pasien yang sedang ditangani. Sehingga penanganan pasien bisa paripurna.
Biopsi ginjal merupakan tindakan pengambilan sampel jaringan ginjal yang bertujuan untuk menegakkan diagnosis pasti pada pasien dengan berbagai penyakit yang mengenai ginjal. Diagnosis pasti tersebut sangat diperlukan untuk menentukan terapi yang paling tepat. Pada saat dilakukan biopsi, perlu dinilai kecukupan jumlah glomerulus pada spesimen biopsi. Penilaian tersebut dapat dilakukan dengan menggunakan mikroskop cahaya biasa pada spesimen yang sudah digenangi dengan larutan NaCl. Apabila jumlah glomerulus yang diperoleh belum mencukupi, maka dilakukan pengambilan sampel ulang. Pada umumnya, cukup dilakukan pemeriksaan dengan pengecatan rutin hematoxsilin eosin (HE), pengecatan histokimia, dan imunofloresen untuk penegakan diagnosis. Apabila diperlukan, dapat dilakukan pemeriksaan menggunakan mikroskop elektron. Namun, pemeriksaan tersebut sangat mahal dan hanya sedikit laboratorium yang mempunyai peralatan yang dibutuhkan.

Pengecatan histokimia yang perlu dilakukan antara lain pengecatan periodic acid-Schiff (PAS), Masson’s trichrome, Congo red, orcein, dan Von Kossa. Pada pemeriksaan dengan mikroskop floresen, dilakukan pengecatan imunofloresen dengan antibodi IgM, IgG, IgA, komplemen, dan fibrinogen. Jaringan yang akan digunakan untuk pengecatan HE dan pengecatan histokimia difiksasi dengan formalin buffer 10%, sedangkan jaringan segar yang akan digunakan untuk pengecatan imunofloresen direndam dalam NaCl kemudian dipotong menggunakan cryo-cut. Untuk pemeriksaan spesimen biopsi ginjal diperlukan potongan jaringan yang sangat tipis setebal 2 mikrometer.

Agar diagnosis dapat ditegakkan dengan tepat, diperlukan penanganan dan pengecatan sampel biopsi ginjal dengan baik. Peran analis patologi anatomik sangat penting dalam semua tahapan, mulai dari penanganan sampel, pengecatan spesimen, sampai tersedianya sediaan yang layak untuk dievaluasi.
Tujuan persiapan pra analitik untuk menggantikan komposisi air dari jaringan dengan substansi, seperti parafin, agar jaringan menjadi lebih keras dan dapat dipotong menjadi bagian yang tipis.

Fase pra analitik dari proses jaringan terdiri dari empat tahap proses meliputi fiksasi, dehidrasi, pembersihan, dan infiltrasia.

Teknisi lab. PA sebaiknya mengembangkan validasi dan mengikuti protokol setiap tahap dari fase pra analitik proses jaringan untuk menghasilkan pewarnaan IHC jaringan yang dapat dipercaya.
PEMBUATAN CELL BLOCK PADA SEDIAAN SITOLOGI YANG BAIK DAN BENAR DI ERA BIOMOLEKULER

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Pemeriksaan sitologi baik dari cairan pleura, ascites, urin dan cairan tubuh lainnya efusi telah diterima dengan baik untuk kepentingan diagnosis, bahkan akhir-akhir ini dipertimbangkan dapat memberikan diagnosis yang definitif, sehingga membantu dalam menetapkan manajemen pasien dalam keganasan. Selain itu, Pada era “personalized therapy” seperti sekarang ini, dimana pemeriksaan lanjutan berbasis molekular mutlak dilakukan sehingga dibutuhkan arsip dari sampel yang dapat digunakan berkali-kali sebagai bahan pemeriksaan. Blok sel dipertimbangkan sebagai salah satu bentuk arsip sampel yang dapat diandalkan dalam pemeriksaan sitopatologi. Blok sel masih mengandung sel-sel yang masih dapat diperiksa dan diteruskan ke pemeriksaan molekular dengan mengambil DNA, RNA, maupun mikro-RNA. Masalah diagnostikpun terkadang timbul dalam praktek sehari-hari, misalnya untuk membedakan antara sel-sel mesothelial reaktif dengan sel ganas jenis adenokarsinoma, sehingga dibutuhkan pemeriksaan lanjutan berbasis imunositokimia yang dapat dipenuhi dengan blok sel. Seorang teknisi yang handal hendaknya mampu untuk menyediakan blok melalui proses-proses yang baku yang akhirnya peran teknisi dalam era “personalized therapy” ini benar-benar kontribusinya dibutuhkan.
Cancer is the most common type of disease that found in the breast. In Indonesia the number of illness and mortality of breast cancer is still on the second rank of malignancy in women after cervical cancer. Some ways used to detect breast cancer, like Fine Needle Aspiration Biopsy (FNAB). This study aims to determine the diagnostic value of FNAB examination in patients with breast cancer.

The study design used was analytic observational diagnostic test method using retrospective data taken from January 2011 - December 2013. This study was conducted in RSUD dr. Soehadi Prijonegoro Sragen, the sample is 50 samples, the examination of FNAB compared to the gold standard histopathological examination showed 31 positive cases, for the examination of FNAB positive and negative histopathology there are 3 cases of breast cancer, and for histopathological examination of the positive and negative FNAB 2 cases, while the negative results on both tests, there were 14 cases.

The results of the analyst examination of FNAB diagnostic sensitivity is 93.90%; specificity of 82.35%; predictive value of positive results of 91.18%; Negative predictive value of 87.5% results; positive probability ratio 5.17; Negative probability ratio of 0.08; and accuracy 90%.

Keyword: Diagnostic test; FNAB; breast cancer
Tujuan penelitian ini adalah untuk mengetahui gambaran mikroskopis jaringan Ca mammae yang difiksasi dengan buffer netral formalin 10% dan Alkohol 70% dengan melihat penyerapan dan keseragaman warna pada inti dan sitoplasma menggunakan pewarnaan Hematoxylin Eosin. Pemilihan larutan alkohol 70% dilakukan karena larutan ini lebih banyak dijumpai dipasaran dan lebih mudah dibuat. Penelitian analitik dengan desain cross sectional ini menggunakan 60 sampel yang difiksasi 2 larutan yaitu buffer netral formalin 10% 30 sampel dan alkohol 70% 30 sampel dibuat preparat histology dengan pewarnaan Hematoxylin Eosin kemudian dinilai gambaran sediaan. Hasil pengamatan gambaran mikroskopis Ca mammae yang difiksasi dengan Buffer netral formalin 10% didapatkan 73% hasil yang baik dan 27% hasil kurang baik. Fiksasi Alkohol 70% didapatkan 23% hasil baik,77 % hasil kurang baik, dengan demikian dilihat dari total skor pada tabel penilaian gambaran mikroskopis menunjukkan hasil yang berbeda pada kedua fiksasi, Disimpulkan Buffer netral formalin 10% lebih baik untuk memfiksasi jaringan khususnya jaringan Ca Mammae.

Keyword: Gambaran mikroskopis, Ca Mammae, fiksasi, Netral Buffer Formalin 10%, Alkohol 70%, pewarnaan Hematoxylin – Eosin.
PADA KASUS KARSINOMA PARU BUKAN SEL KECIL JENIS ADENOKARSINOMA: OPTIMASI PULASAN IMUNOHISTOKIMIA PDL-1

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Keyword: Blok sel, PDL-1, cairan pleura
PEWARNAAN HISTOKIMIA PADA JARINGAN BIOPSI GINJAL

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Metode: Pada tulisan ini akan dipaparkan berbagai metode dan interpretasi pewarnaan histokimia yang dilakukan di Instalasi Patologi Anatomi RSUP Dr. Sardjito, yang diperlukan untuk menunjang penegakan diagnosis. Pewarnaan histokimia tersebut adalah Masson’s trichrome, periodic acid-Schiff (PAS), Congo red, orcein, dan Von Kossa.


Kesimpulan: Pewarnaan histokimia mudah dilakukan dan sangat penting untuk menegakkan diagnosis histopatologik pada spesimen biopsi ginjal.

Keyword: pewarnaan histokimia, biopsi ginjal, Masson’s trichrome, PAS, Congo red
Protein RAS merupakan sebuah GTPase dan merupakan salah satu molekul penting dalam jalur sinyal downstream pada reseptor epidermal growth factor (EGFR). Protein RAS mentransduksi sinyal dari reseptor yang melekat di membrane sel melalui banyak jalur efektor downstream sehingga mempengaruhi proses-proses seluler yang fundamental, meliputi: proliferasi, apoptosis, dan diferensiasi. Secara total, mutasi yang menyebabkan teraktifasinya KRAS dan NRAS terjadi pada 20-50% dan 1-6% dari kejadian kanker kolorektal, umumnya di exon 2, 3, atau 4. Status mutasi gen RAS bersifat relevan terhadap resistensi obat primer dari kanker kolorektal yang diterapi dengan antibody monoclonal anti-EGFR. Pasien dengan gen KRAS dan NRAS wild-type dapat merespon dengan Erbitux (Cetuximab) atau Vectibix (Panitumumab) sedangkan pasien dengan gen mutan KRAS dan NRAS tidak menunjukkan respon baik dengan terapi tersebut. Pengujian RAS direkomendasikan oleh NCCN Clinical Practice Guideline in Oncology and European Drug Administration Organization pada proses seleksi pasien kanker kolorektal yang akan diberi terapi antibody anti-EGFR. Metode pemeriksaan K/N RAS menggunakan kit komersial untuk purifikasi DNA dan menggunakan kit komersial untuk mutase deteksi K/N Ras pada exon 2, 3, dan 4. Pemeriksaan mutasi menggunakan alat qRT-PCR. Sebelum dilakukan purifikasi DNA, dilakukan terlebih dahulu pemilihan sel kanker. Pemilihan sel kanker dilakukan oleh dokter spesialis Patologi Anatomi, kemudian diambil bagian yang mengandung tumor. Pemilihan hasil ini sangat berpengaruh pada hasil akhir qRT-PCR karena dapat menyebabkan hasil negative atau positif palsu.

**Keyword:** KRAS NRAS PRA ANALITIK