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Gynaecological Pathology

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Histopathological spectrum of ovarian tumours- a prospective study at college of medical sciences, Bharatpur, Chitwan, Nepal

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Background: Ovary is the third most common site of neoplastic lesions in female genital tract. Ovarian tumours occur in any age group. Ovarian neoplasms have become increasingly important because they have gradually increased mortality rate due to female genital cancers.
Aims: Find out the histopathological pattern of ovarian tumours in College of Medical sciences and Teaching Hospital and to evaluate correlation between clinical and histopathological diagnosis.
Methods: This study was carried out on 75 cases of ovarian tumour specimens fulfilling inclusion criteria at Department of Pathology in CMS-TH, from January 2016 to June 2017. Clinical data was recorded in proforma. The specimens were grossed, processed and stained using standard procedures and were analysed using light microscopy. Statistical analysis was done using SPSS 20.0.
Results & Conclusions: Age range of the patients was from 10 to 70 years with maximum cases 32.0 in the age group of 21–30 years. Histopathological diagnosis was mature cystic teratoma 38.8%, serous cystadenoma 29.4%, mucinous cystadenoma 8.0%, borderline mucinous tumour 5.3%, serous cystadenocarcinoma 4.0%, dysgerminoma 4.0%, steroid cell tumour 2.7%, and borderline serous tumour, mucinous cystadenocarcinoma, mature cystic teratoma transforming into SCC, immature teratoma, Sertoli Leydig cell tumour and fibroma 1.3%.
Benign tumours were more common than malignant tumours for all age group. Most of the tumours were of surface epithelial cell origin. Mature cystic teratoma the most common ovarian tumour as well as the most common benign tumour. Serous cystadenocarcinoma and dysgerminoma were most common malignant tumours. Malignant surface epithelial tumours usually occurred in older age whereas malignant germ cell tumours occurred in younger age. There was significant statistical clinico-pathological correlation.

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ARID1A expression in various molecular subgroups in endometrial carcinomas

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Background: ARID1A (AT-Rich Interaction Domain 1A) is characterized as a tumour suppressor gene and has been found mutated in all types of endometrium-associated tumours.
Aims: Our purpose was to investigate ARID1A expression in endometrial carcinomas and assess prognostic importance in various molecular subgroups.
Methods: We included in our study 50 cases of ECs diagnosed in a Romanian cohort of hysterectomized women from two clinical institutions over 5 years 2014–2019. For each case, we evaluated a vast set of parameters tumour: histology, tumour grade, necrosis, lympho-vascular invasion, myometrium invasion and pattern of invasion, adenomyosis etc. Immunohistochemistry was performed for molecular classification dividing the cohort into four subgroups: MSS subgroup, MSI subgroup, p53abn subgroup and p53wt subgroup. Immunohistochemistry for ARID1A was performed on all cases and any definitive nuclear staining for ARID1A was interpreted as positive.
Results & Conclusions: Clinical and demographic analysis showed frequent ARID1A loss in the 61–70-year category. 19 cases of endometrioid carcinomas, 1 case of serous carcinoma and 2 cases of mixed carcinomas were negative for ARID1A. FIGO grade 2 carcinomas revealed ARID1A loss in 12 cases, while FIGO grade 3 carcinomas revealed 13 cases positive for ARID1A. There was no loss for this marker in 6 cases with associated omentectomy, negative for tumour (P = 0.032). Loss of ARID1A was seen in 21 cases of PR positive cases (P = 0.05), in 5 cases in the p53 abnormal subgroup and in 17 cases in the p53 wild-type subgroup (P = 0.032). Overall survival for intact nuclear ARID1A expression was 75%.
P53 and ARID1A mutations may co-occur in a subset of aggressive endometrial cancers. Our results show that ARID1A loss correlates with poor prognostic parameters. We believe that this immunohistochemical marker should be used as a routine prognostic marker.

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Histopathologic pattern of benign tumour of female genital tract in Birnin-Kebbi, Nigeria

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Background: Gynaecological specimens form the major proportion of tissue biopsies in most pathology departments. Sexually active women are more prone to both benign and malignant diseases of the female genital tract.
Aim: This study aims to find out the histopathological distribution of benign tumours occurring in the female genital tract (FGT).
Methods: This is a 4-year retrospective histopathological analysis of benign tumours of the female genital tract diagnosed between 2009–2012 in the Department of Histopathology, Federal Medical Centre, Birnin-Kebbi, Kebbi State, North-West, Nigeria. All the Haematoxylin &Eosin stained slides and paraffin embedded blocks were retrieved and studied. The clinical data such as the age, sex, site of lesion and clinical summary were extracted from the histology request forms.
Results: A total of One hundred and thirty-six (136) women had benign tumours of the female genital tract. The age range is between 10–70 years, the mean age was 40 years, while 11 patients did not specify their ages. The peak age incidence was in the fourth decade (30–39) years. The most common benign tumour is leiomyoma 100 (73.5%), this is followed by mature cystic teratoma 12 (8.8%), serous cystadenoma 9 (6.6%), granulosa cell tumour 7 (5.2%), mucinous cystadenoma 3 (2.3%), fibroma 2 (1.5%), granular cell tumour 1 (0.7%), adenofibroma 1 (0.7%), and Brenner tumour 1 (0.7%).
Conclusion: Benign tumours of the female genital tract is common in our environment. A very high-index of suspicion, good clinical acumen, adequate histopathologic sampling and reporting can go a long way at making diagnosis and giving appropriate treatment.

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High grade sarcoma arising in a background of endometriosis – an easy miss

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Background: Endometriosis is a common pathology seen in the woman in the childbearing age which is characterized by abnormal endometrial tissue outside the uterine cavity. The development of stromal sarcomas on the foci of endometriosis is extremely rare and the differential diagnosis from other tumours of myogenic, vascular, haematopoietic or epithelial origin may present great diagnostic difficulties.
Aims To report a case of high grade stroma sarcomas arising within a background of endometriosis, which was overlooked initially due to lack of appropriate clinical information. Also discuss common endometrial stromal sarcomas.
Methods: A 45 year old female with a known history of chronic pelvic pain, severe endometriosis and previous left ovarian ruptured endometrioma presented with recurrent fevers and was found to have a frozen abdomen. The core biopsy showed pleomorphic spindle cells with hyperchromatic nuclei, prominent nucleoli and delicate amphophilic cytoplasm. The cells were arranged in vague fascicles and brisk mitotic activity was seen. No glandular component was identified. There was admixed inflammatory infiltrate. Initial histological evaluation and immunohistochemistry suggested reactive inflammatory myofibroblastic process. On review a large intra-abdominal mass on MRI was found. The mass was occupying most of the pelvis but not invading the bladder. The mass appeared to originate from adnexa and was separate from the uterus. Further immunohistochemistry showed tumour cells staining diffusely positive for CD10, cyclin D1, Caldesmon and EMA. There was patchy weak nuclear expression of BCOR. CK, ER, desmin and SMA, CD31, ERG and SOX10 were negative.
Results: The final diagnosis was made correlating the pathological and radiological imaging.
Conclusions: An accurate diagnosis is very important for an early intervention to prevent an adverse outcomes.

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Complete hydatidiform moles with mosaic histology: a immunohistochemical study of 10 cases

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Background: Complete moles (CM) may pose a diagnostic challenge. They resemble a twin placenta with CM or partial mole (PM). Differential diagnosis is very important for patient management.
Aim: To clarify histologic and immunohistochemical features and its histogenesis.
Methods: Ten cases of CM with mosaic histology in the first trimester were retrieved, and their initial diagnoses included CM (3 cases), a twin placenta with CM (2), CM with mosaic histology (2), PM (2), and hydropic abortion with trophoblastic hyperplasia (1). They were analysed with immunostaining of p57 (Kip2) and TSSC3, which are products of paternally imprinted, maternally expressed genes.
Results: Histologically, 5 cases had both CM and placental mesenchymal dysplasia (PMD) components. The 5 remaining cases had CM and non-PMD components. Cytotrophoblasts and stromal cells of CM components were negative for p57. Cytotrophoblasts and stromal cells of non-PMD components expressed p57. In PMD components, cytotrophoblasts were positive for p57 and TSSC3, and stromal cells were negative for p57, indicating that the stromal cells were androgenetic, and the cytotrophoblasts were biparental.
Conclusions: The findings support the hypothesis that the misexpression of p57 and TSSC3 is involved in the abnormal development of androgenic CM. CM with mosaic histology can be classified into two groups; CM with PMD components and CM with non-PMD components. None of the cases was CM with twin, but rather CM with androgenic/biparental chimera or mosaic molar gestation and PMD. Immunohistochemistry of the imprint gene products p57 and TSSC3 can be a useful screening tool for cytogenetic analyses of CM with mosaic histology. These patients should be followed with HCG monitoring as conventional CM patients.

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Evaluation of the immunohistochemical expression of BCL-2 in molar pregnancies using a tissue microarray (TMA) model

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Background: Gestational trophoblastic diseases (GTD) include hydatidiform moles (HM) and gestational trophoblastic tumours (GTT). HMs are either partial (PHM) or complete (CHM). GTT includes invasive mole, choriocarcinoma, placental site trophoblastic tumour and epithelioid trophoblastic tumour. Despite the well described histopathological criteria, some of these lesions remains to be challenging in arriving a precise diagnosis. Moreover, there are no strict histopatholgical or immunohistochemical features those could predict persistence or progression of benign HM to GTT.
Aim: To explore the expression of Bcl-2 immunohistochemistry (IHC) in HMs using Tissue MicroArray (TMA) with relation to diagnosis and/or prognosis of these lesions.
Methods: TMAs were constructed using archival material of 237 HMs (95 PHM and 142 CHM) and 202 control normal trophoblastic tissues "products of conception (POC) and unremarkable placentas". Sections were immunohistochemically stained using antibodies against Bcl-2. The staining was assessed semi-quantitatively (intensity and percentage of the positive cells) in different cellular components (trophoblasts and stromal cells) and correlated with histopathological/clinical parameters.
Results: Bcl-2 showed cytoplasmic expression in more than 95% of trophoblasts of PHM, CHM and controls. The staining showed a significant reduction of strong intensity from of controls (73.7%), PHMs (76.3%) to CHM (26.9%). There was a statistically significant difference between PHM and CHM in the intensity (*P*-value 0.0005) and the overall scores (*P*-value 0.0005) but not the percentage score (*P*-value >0.05). No significant difference was observed in the positivity of the villous stromal cells between the different studied groups. There were no significant relation of BCl-2 with disease progression. All the different cellular components were visible using TMA model of two spots/case (3 mm diameter, each) in more than 90% of cases.

Conclusions: Decreased BCL-2 expression in CHM compared to PHM and normal trophoblasts indicates increased apoptosis and, consequently, uncontrolled trophoblastic proliferation. Construction of TMA in duplicates using cores of 3 mm diameter can overcome tissue heterogeneity of complex lesions.

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Botryoid embryonal rhabdomyosarcoma of the cervix: a case report

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Background: The embryonic rhabdomyosarcoma (RMS) of the cervix is a rare sarcoma. It usually occurs as a polypoid vaginal or cervical mass in children and young women. The therapeutic approach to these tumours has evolved from radical surgery to conservative surgery, followed by chemotherapy.
Aims: To discuss diagnostic features of the disease, epidemiology, as well as prognostic factors and treatment strategies.
Methods: We present a case report of the botryoid subtype of embryonal rhabdomyosarcoma (RMS) of the cervix diagnosed at our institution.
Results: We report on a 16-year-old girl with a recurrent cervical polyp measuring 5 cm long axis. Histological examination involves two polypoid fragments lined by a squamous epithelium that is ulcerated in places. The chorion is often loose and myxoid and is the site of tumour proliferation of variable density. The tumour cells have irregular elongated, sometimes star-shaped, atypical nuclei with poorly defined clear cytoplasm. Rhabdomyoblasts with abundant eosinophilic cytoplasm are present. In immunohistochemistry, the tumour cells partially express desmin and very focally myogenin, leading to the diagnosis of botryoid embryonal rhabdomyosarcoma.
Conclusion: Any uro-genital polyp, especially of the young woman, must be carefully examined in order not to ignore the embryonic rhabdomyosarcoma (RMS) in its botryoid form whose management is delicate.

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Expression of vascular endothelial growth factor, Smooth Muscle Actin-alpha with microvessel density and morphometric evaluation of endometrial blood vessels in patients with idiopathic heavy menstrual bleeding

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Background: Abnormal uterine bleeding accounts for approximately 50% of all hysterectomies. Altered vascular morphological changes and expression of markers of angiogenesis have been implicated as an underlying cause in these cases.
Aims: To evaluate the endometrial vasculature status of patient of idiopathic heavy menstrual bleeding (HMB) using Vascular Endothelial Growth Factor, Smooth Muscle Actin – alpha, micro vessel density and morphometry.
Methods: A prospective study of 40 cases of idiopathic HMB and 20 age matched controls was done. Immunohistochemistry with Vascular Endothelial Growth Factor (VEGF) and Smooth Muscle Actin (SMA-α) was performed, and the expression and staining pattern was recorded. Morphometric analysis was performed on CD34 stained sections using Leica Application Suite, version 4.4.0 software. Micro-vessel density (MVD) was calculated by vascular hotspot method.
Results & conclusions: There were statistically significant increase in micro-vessel calibre (*P value = 0.01*) and MVD (*P value <0.001*) in the cases of idiopathic HMB as compared to controls. Statistically significant increase in VEGF vessel count (*P value <0.001*) was also seen. A decline in SMA-α expression was seen in cases as compared to control group *(P value = 0.23)*. The present study corroborates the finding of increased expression of VEGF, resulting in altered angiogenesis in HMB. A decline in SMA-α expression in these patients indicate low pericyte coverage and altered blood flow regulation as an underlying pathology. The knowledge thus gained can be utilized in management of HMB and utilization of targeted therapies for HMB patients.

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Mucinous borderline-like tumour of the gastrointestinal type arising from a mature cystic teratoma of the ovary: a case report

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Background: Mature cystic teratomas (MCT) are the most common germ cell tumour of the ovary, comprising 70% of benign ovarian masses in the reproductive years and 20% in postmenopausal women. It is an ovarian cystic tumour composed of well-differentiated tissues arising from at least two of the three germ cell layers. Although MCT is the most common germ cell tumour of the ovary, mucinous tumours arising from mature cystic teratomas are rarely reported. It is estimated that mucinous tumours are present in 2%–11% of mature ovarian cystic teratomas, and 3%–8% of mucinous ovarian tumours are associated with teratomas. Borderline ovarian tumours (BOTs) are also reported to be relatively uncommon with an incidence of 1.5–2.5 per 100,000 people per year.
Aims: To report a rare case of mucinous borderline ovarian tumour arising from a mature cystic teratoma in a 34-year-old female presenting with abdominal mass.
Methods: The author reviewed the chart of the patient. Slides were reviewed and tissue blocks were sent to outside laboratories for immunohistochemical staining.
Results & Conclusions: The tumour showed two population of tumour cells, keratinized stratified squamous epithelium and gastrointestinal-type mucinous epithelium, consistent with mature teratoma. Cystic spaces were formed and lined by simple to stratified columnar epithelium with goblet cells and some papillary formation. The individual tumour cells exhibited enlarged, hyperchromatic, round to oval nuclei, with occasional prominent nucleoli, ample cytoplasm and increased mitotic activity. No stromal invasion was noted. Based on the histomorphology findings, mucinous intestinal-type borderline ovarian tumour arising from a mature teratoma was considered. Immunohistochemical (IHC) markers were done showing diffuse positivity for CK7, focal positivity for CK20, and negative staining for PAX8, SATB2, ER, and PR. Final diagnosis was Mucinous Borderline-like Tumour of the Gastrointestinal Type Arising from a Mature Cystic Teratoma of the Ovary.

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Granulomatous mycosis fungoides of the vulva – a diagnostic challenge

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Background: Mycosis fungoides (MF) is the most common type of primary cutaneous T cell lymphoma. However, vulval MF is exceptionally rare and results in a diagnostic challenge as it mimics several inflammatory dermatoses.
Aims: To the best of our knowledge this is the first reported case of the rare variant, granulomatous MF, described in vulva.
Methods: We describe a case of a 64-year-old lady with a 3-year history of scaly, eczematous swelling of the vulva.
Results: Her initial biopsies showed granulomatous inflammation with differential that included infection, Crohn's disease and sarcoidosis. The lesion gradually spread to the perineum, right medial buttock and upper gluteal cleft, and became indurated and ulcerated. Pendulous skin was absent.
Her extensive investigations included peripheral blood analysis and serum angiotensin-converting enzyme which were unremarkable. Infective serologies were negative. Chest, abdomen and pelvis computed tomography scan and colonoscopy were normal. Tissue polymerase chain reaction, fluorescent studies and cultures for mycobacteria were negative as were mycology studies.
Incisional biopsy from the right buttock showed confluent interstitial, perivascular and periadnexal non-necrotizing granulomas extending through the full thickness of the dermis into the subcutis. There were multinucleated giant cells and a scant lymphocytic cell infiltrate with minimal cytological atypia. There was no epidermotropism, folliculotropism or syringotropism. The lymphoid infiltrate was predominantly CD4 positive and positive for CD2, CD3 and CD5. There was loss of CD7. Monoclonality was proven with T-cell gene rearrangement studies. The patient responded well to radiotherapy.

Conclusions: Granulomatous mycosis fungoides lacks specific clinical features. The granulomatous component may obscure the lymphomatous component, and is often initially misdiagnosed as granulomatous dermatitis. Furthermore, there may be no prominent epidermotropism and minimal cytological atypia to assist the diagnosis. This case highlights the need to consider lymphoma in the differential diagnosis of granulomatous vulvar lesions.

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Malignant deciduoid mesothelioma: case presentation of an exceptional variant

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Background: Primary malignant deciduoid mesothelioma is a rare subtype of epithelioid mesothelioma. The histological diagnosis of this entity represent a challenge for the pathologist.
Aims: Highlight the rarity of this variant and discuss differential diagnoses.
Methods: Case report.
Results & Conclusions: We describe a case of a 42-year-old woman who presented with a pelvic mass associated with moderately abundant ascites. Macroscopic examination showed a mass of 10 cm in diameter, multilobed, greyish-white in appearance, firm in consistency. The ovary was macroscopically normal.
The histological examination showed a malignant proliferation arranged in solid nests and in trabecula. The tumour cells are large round or polygonal, their cytoplasm is usually abundant eosinophilic sometimes vitreous. The nucleus is vesicular with a prominent nucleolus. The immunihistochemical profile llustrated that Cytokeratin 7, Calretinin, Podoplanin and WT-1 were positive. Cytokertin 20 showed a negative result. We illustrate an extremely rare entity of primary epithelioid mesothelioma. It is important for pathologists to recognize this morphological variant of epithelioid mesothelioma, which is easily confused with other diagnoses.

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Risk prediction for endocervical adenocarcinomas (stage IA2-IB3): an international multi-centre study by members of the international society of gynaecological pathologists (ISGYP)

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Background: The treatment of endocervical adenocarcinomas (EACs) is currently predominantly based on tumour stage. The Silva pattern of invasion could potentially allow for personalized treatment and diminish overtreatment.
Aims: To investigate the Silva pattern as a prognostic marker for survival in HPV-associated EACs.
Methods: ISGYP members (from 20 countries) retrospectively reviewed EAC histology slides and provided clinical data. Inclusion criteria were age □18 years, all types of surgically-treated EAC or adenosquamous carcinomas, FIGO 2018 stages IA2 to IB3. The Silva patterns analysed were Pattern A, Pattern B without lymphovascular space invasion (LVSI), Pattern B with LVSI and Pattern C. STATA/IC 17.0 was used to perform survival (uni/multivariate) analyses to investigate the association of patient age, FIGO stage and Silva pattern with recurrence-free and overall survival (OS).
Results: Of the 896 tumours, 115 (12.8%) were stage IA2 (51 Pattern A, 34 Pattern B without LVSI, 8 Pattern B with LVSI, 22 Pattern C), 446 (49.8%) were IB1(114 Pattern A, 118 Pattern B without LVSI, 32 Pattern B with LVSI, 182 Pattern C), 276 (30.8%) were IB2 (39 Pattern A, 61 Pattern B without LVSI, 24 Pattern B with LVSI and 152 Pattern C), and 59 (6.6%) were IB3 (6 Pattern A, 10 Pattern B without LVSI, 5 Pattern B with LVSI, 38 Pattern C). Multivariate analysis confirmed Pattern A (SHR 0.30, 95% CI 0.16–0.58, *P*-value 0.000) and Pattern B without LVSI (SHR 0.45, 95%CI 0.25–

0.84, *P*-value 0.011) to be associated with significantly reduced risk of recurrence ($N = 87$) compared to Pattern C. OS ($N = 25$) was significantly higher for Pattern A (SHR 0.13, 95% CI 0.04–0.37, *P*-value 0.000) compared to Pattern C.
Conclusions: Further study incorporating 4-tiered and binary Silva pattern into clinical trial design is warranted. This could provide additional prognostic information for risk stratification in HPV-associated EACs.

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Papillary thyroid carcinoma arising in the background of struma ovarii; a very rare entity

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Background: Struma ovarii (SO) is an uncommon ovarian tumour (0.3–1% of all ovarian tumours and 2% of mature teratomas). SO is difficult to identify on a clinical or imaging basis, and it is usually discovered incidentally, with only a few occurrences reported in the literature. Malignant transformation is uncommon, in about 5% of instances. Majority are papillary carcinoma, including its follicular variant and follicular carcinoma.
Aims: Reviewing the literature and case reports on this diagnosis would aid in the management and follow-up of the index patient as well as in the future.
Methods: A 58-year-old female, para 4, presented with lower abdominal pain and difficulty in micturition. On examination, she had 22 weeks size pelvic mass. Serum TSH, CA-125, AFP, B-HCG were within normal range. CT scan showed a large multiloculated solid cum cystic lesion arising from pelvis, measuring 165 × 193 × 116 mm, suggestive of mature teratoma. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy along with frozen section of left ovarian cyst which was reported as mature teratoma predominantly composed of thyroid tissue, no immature component. Formalin fixed paraffin embedded sections of ovarian cyst showed a solid component composed of thyroid tissue exhibiting variably sized follicles. Macrofollicles were intermixed with microfollicles showing nuclear enlargement, crowding, overlapping, clearing, and grooves. Few papillary structures were seen along with psammomatous calcifications. There was positive staining of CK19 and loss of expression of CD56 on immunohistochemistry.
Results & Conclusions: Final diagnosis of papillary thyroid carcinoma arising in the background of struma ovarii was made. Final staging after histopathological examination was FIGO Stage IA. There are no definitive guidelines for its management, therapeutic decisions should be made on an individual basis, based on clinical and histopathological evidence.

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Rare occurrence of undifferentiated uterine sarcoma with osteosarcomatous differentiation along with clear cell renal cell carcinoma in an elderly female

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Background: Undifferentiated uterine sarcoma (UUS) is a rare malignancy of the female genital tract. The diagnosis is made after histopathological evaluation following surgical removal because imaging modalities cannot accurately distinguish between the different malignant processes. Heterologus differentiation can occur in UUS but is rare. The occurrence of USS and Clear cell RCC in the same patient is extremely rare and has not been reported in the English literature yet.
Aims: It is very rare to occur UUS and Clear cell RCC simultaneously and no case has been reported yet. We report here a case of elderly female patient having these two tumours concomitantly.
Methods: A 59-year-old lady, known case of Clear cell RCC diagnosed few months ago presented to gynaecology clinic with abdominal mass. CT scan revealed a lesion in myometrium. Radiological impression was fibroid most likely representing degenerative changes. Intraoperative findings were huge fragile tumour mass arising from posterior uterine wall fibroid and involving small bowel mesentery completely until its base. Uterus with both adnexae, small bowel loop, omentum and lymph node dissection was performed.
Grossly, uterus was distorted and showed a large friable tumour in the myometrium measuring 15 x 8.5 x 7 cm. Multiple separate pieces of tumour were also found. The tumour deposit at the serosal aspect of small bowel was also identified.
Microscopic examination revealed a malignant tumour in the corpus, showing varied morphology,

with areas resembling undifferentiated spindle cell neoplasm with bizarre pleomorphic nuclei, confluent areas of necrosis and infarction, multinucleated giant cell rich and osteosarcoma like morphology with deposition of chondroid and osteoid matrix. Some areas with fixation artefacts showed a pseudo-nested architecture with rich vascular background, resembling RCC. A large panel of immunostains were performed. Epithelial markers were negative, CD10 showed patchy positivity, PAX8, RCC, Desmin, CD34, Melan A, HMB45 and TFE3 were negative. Vimentin was positive and SATB2 was positive in areas with bone formation.

Results & Conclusions: Based on morphological and IHC findings, the final diagnosis of undifferentiated uterine sarcoma with heterologous osteosarcomatous differentiation was made after taking opinions from other colleagues, with expertise in gynaecology and soft tissue pathology.

Present case constitutes a rare occurrence of undifferentiated uterine sarcoma with osteosarcomatous differentiation along with Clear cell renal cell carcinoma occurring simultaneously.

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Evaluation of clinicopathological features of genital melanomas over a period of 8 years- experience of a tertiary care

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Background: Mucosal melanomas are rare and different from melanomas arising from skin or other sites of body. They account for about 0.03% of new cancer diagnoses annually. According to a study from USA conducted in 2017, less than 2% melanomas arise from mucosal surfaces, with majority occurring in head and neck followed by vulvo-vaginal and anorectal regions.

While melanocytes are most abundant in skin, they are present in smaller number in mucosa. It is also well known that melanomas arising from different sites are epidemiologically and genetically distinct and these differences have important implications for both disease prognosis and treatment.

Aims: To determine clinico-pathological features of genital melanomas.

Methods: Patients with histologically proven genital malignant melanomas between 2014 and 2021 were identified from the sectional database. Clinical and pathological features were reviewed by 3 pathologists. Age, site of biopsy, histological subtype, pigment burden, immunostains and type of procedure were evaluated.

Results: Nine patients were diagnosed with malignant melanoma between 2014 and 2021. Patient's age ranged from 31 to 75 years. Of 9, 6 were from vagina, 2 from cervix and 1 was from vulva. 1 tumour had pure spindled morphology, 2 had epithelioid, 5 had mixed features while 1 was anaplastic. Most specimens had moderate pigmentation (6/9). Combination of immunostains were used but majority had performed at least 3 (HMB-45, Melan-A and S-100) in 6/9 cases.

Conclusions: Genital mucosal melanomas are rare and infrequently encountered. Only 9 cases were seen in the past 8 years. Understanding the tumour biology and different clinopathological aspects of the disease may help both pathologists and clinicians in choosing targeted therapies for better patient outcomes.

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Next generation sequencing for detection of gene mutations in ovarian cancer: a pilot study

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Background: Epithelial ovarian cancer (EOC) is still the deadliest form of gynaecological malignancy. The reason for the high death rate is the late representation, as most of the newly diagnosed women (70–85%) are at FIGO stage III/IV of the disease, as well as relapse with resistance to subsequent chemotherapy. After surgery, first-line platnium-based chemotherapy is administered. Most women with advanced disease develop many episodes of recurrent disease with progressively shorter disease-free intervals, culminating in chemoresistance. Development and application of molecular targeted agents for EOC treatment begins with thorough genetic mutations profiling to detect theraputic targets.

Aims: Identify gene mutations in ovarian cancer.

Methods: Next generation sequencing (NGS) was used to profile the somatic mutation spectrum in samples from 12 ovarian cancer patients operated at the University Clinic of Gynaecology Skopje. The

samples were analysed for mutations of 15 genes (EGFR, TP53, MET, PDGFRA, AKT1, ERBB2, FOXL2, GNA11, KIT, KRAS, NRAS, RET, BRAF, GNAQ and PIK3CA).
Results: 11 of the 12 included patients exhibited 14 somatic TP53 mutations. 42.86% of the detected mutations were missense, all of them located in the DBD, followed by frameshift variations (35.71%) and nonsense mutations (21.43%). 78.57% of all mutations were mapped in exons 4–8 of the DBD. Four of the TP53 mutations were "hotspot" (R175H, R248Q, R249S and R273H), seven were known but non-hotspot (S166*, R342*, R156fs, N200fs, E285K, R267W and E336*) and two deletions (c.1042delC and c.461delG) and one insertion (c.371_372insAG) that are absent from IARC TP53 database and ClinVar.
Conclusion: TP53 remains the most frequently altered gene in EOC and NGS was proven to be efficient method for identifying wide range.
The findings of this study have important implications in understanding the TP53 mutations in EOC.

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Guarded approach to gastric type lesions of cervix even when the radiological findings are alarming

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Background: A 47 year old female, para 4, all normal vaginal deliveries, presented with 8-10 years history of profuse vaginal discharge, usually filling 3-4 pads per day. On colposcopy by a gynaecologist, she had an abnormal looking large cervix, but ectocervix was normal. Pap smear for human papilloma virus (HPV) was negative and had normal liquid-based cytology. A magnetic resonance imaging (MRI) was done to establish the cause for profuse vaginal discharge, which showed 3x4cm lesion composed of multi cystic glands within the endocervix, highly suspicious for adenoma malignum. Hysteroscopy, dilation and curettage was done and multiple biopsies showed confusing pathology, raising concerns for gastric type adenocarcinoma. A cervical LLETZ was done prior to hysterectomy and the histological changes were compatible with lobular endocervical glandular hyperplasia (LGEH).
Aims: To differentiate benign LGEH from gastric type adenocarcinoma or minimal deviation carcinoma (MDA) and practice a guarded approach on small biopsy material.
Methods: Immunohistochemical stains done such as Keratin7, p16, MUC6, CAIX, ER, PR and Ki67 index.
Results & conclusions: A due consideration to history is important, although the findings of MRI were alarming for an underlying aggressive malignancy. Historically, the description of LGEH suggests that it had been erroneously regarded as MDA because of its gastric immunophenotype. Subsequently it has been reported and understood that multiple cysts located in the upper portion of cervix and endocervical canal are characteristic of LGEH. MDA on the other hand does not show significant number of cysts. From a historical point of view bland morphology of MDA has been overemphasized. In the present case, the cytomorphologic features were bland in endocervical glands and moreover there was distinct border to lesion with no evidence of infiltration.

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Clinico-pathological significance of hormone receptors expression in uterine leiomyomata

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Background: Uterine leiomyomata (fibroids) are benign smooth muscle neoplasms of the uterus affecting about 60% of women aged 45 and above. The abundant expression of oestrogen receptor (ER) and progesterone receptor (PR) in uterine leiomyoma ensures considerable responsiveness to circulating oestrogen and progesterone making them potential therapeutic agents for tumour.
Aims: The aim of the study is to determine the steroid receptors expression in uterine leiomyoma at the University College Hospital, Ibadan.
Methods: This is a retrospective cross-sectional study. The study population includes all hysterectomy and myomectomy patients with histological diagnosis of uterine leiomyoma managed at the University College Hospital, Ibadan from January to December 2021.

Sections from tissue blocks were stained for ER and PR immunohistochemistry. Cases were examined histologically for degenerative changes. Data analysis was carried out using the Statistical Package for Social Sciences version 22 (SPSS 22). The level of significance will be set as $P < 0.05$.

Results: There were a total of 154 cases of histologically diagnosed leiomyoma seen during the study period. Biopsy material was obtained predominantly from myomectomies (113, 73.4%) with hysterectomy specimens accounting for the remainder. Most cases (84.4%) were positive for the progesterone receptor, oestrogen receptor positivity was observed in 58.4% of cases. Both PR and ER positivity were significantly associated with being of young age and absence of degenerative features on histology. The mean age of patients was 39 ± 8 years. The majority of patients were of young age (113, 73.4%). The majority of leiomyomas (102, 66.2%) showed degenerative features.

Conclusions: There was a significant high-level expression of ER and PR in women with uterine leiomyoma associated with clinical symptoms of pain and menorrhagia. These findings suggest that hormonal manipulation may be used for patients with uterine leiomyoma.

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Primary peritoneal extraovarian granulosa cell tumour: a case report

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Background: Extraovarian granulosa cell tumour (GCTs) are extremely rare and were thought to derive from the mesenchyme of the genital ridge.

Case report: A 60-year-old woman with underlying diabetes mellitus and bronchial asthma. She presented with intermittent left iliac fossa discomfort and pain for one year duration. She had a history of hysterectomy with bilateral salpingo-oophorectomy 7 years ago for endometrial atypical hyperplasia, uterine leiomyoma and right ovary endometriotic cyst. Physical examination revealed multiple palpable nodules on the lower abdomen. Serum CA-125 was also elevated. Computed Tomography of the thorax, abdomen and pelvis showed multiple peritoneal and intraperitoneal enhancing solid-cystic lesions with the largest nodule measuring 13.2 × 11.8 × 8.1 cm (APxWxCC). The urinary bladder and sigmoid colon were displaced medially. These lesions were also seen at the region of the pancreatic body, fundus of the stomach and adjacent splenic hilum. Laparotomy and open biopsy of the omentum were performed and findings revealed multiple peritoneal deposits involving omentum and mesentery. Histopathological examinations showed multiple tumour nodules composed of malignant cells with heterogenous architectural patterns composed of diffuse sheets, cord, trabeculae, insular, gyriform and watered silk pattern displaying uniform, having round to oval nuclei with pale scanty cytoplasm. Some exhibit angulated nuclei and nuclear grooving. Call-Exner bodies and frequent mitotic activities are seen. Immunohistochemical studies show the malignant cells are positive for Inhibin, Calretinin, WT-1, Oestrogen receptor (ER), Smooth muscle actin (SMA) and negative for CKAE1/AE3 and EMA. Previous HPE slides were reviewed and showed no evidence of primary lesion. Diagnosis primary extraovarian GCT is established.

Conclusion: Extraovarian GCT should be included in the differential diagnosis in women who have undergone oophorectomy with intraperitoneal tumours. The possibility of metastasis has to be excluded before making a diagnosis of extraovarian GCT. Early diagnosis and treatment is important for prompt management and improved outcome.

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Malignant *STK11* tumour in a patient with Peutz-Jeghers Syndrome: a first Australian case report of a newly described entity

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Background: Peutz-Jeghers Syndrome (PJS) is an autosomal dominant hereditary genetic condition with a clinical manifestation of hamartomatous polyps throughout the GI tract and melanocytic macules around the mouth, oral mucosa, eyes, nostrils and perianal region. Most cases of PJS are associated with a germline mutation in the tumour suppressor gene *STK11/LKB1*. The risk of developing an ovarian tumour in PJS is double that of the general population, however most are benign.

Malignant *STK11* Tumour in PJS associated adnexal / ovarian malignancy is only very recently recognized. We present a case of a 22-year-old female with a large malignant sex cord stromal tumour of adnexal / ovarian origin in the context of known underlying PJS.
Aims: The case presented adds to a small number of similar cases recently reported in the literature.
Methods: A 22-year-old female presented with lower abdominal pain and change in bowel habit. Past medical history included PJS. A large pelvic mass was identified on examination and further imaging showed a 16 cm pelvic mass abutting the right adnexa. The patient underwent a laparotomy for removal of tumour mass and made an uneventful recovery.
Results & Conclusions: H&E stain showed a distinctive adnexal tumour of basaloid cells with high nuclear to cytoplasmic ratio and small nucleoli, arranged in sheets and cords in a myxoid background. The features were identified as those of a malignant *STK11* mutated adnexal tumour and further molecular characterization was performed.
The case presented is rare on several aspects. Ovarian / adnexal malignancy is rare in the context of PJS. Further research and case numbers are required to better define and understand this tumour entity to improve patient diagnosis, management and prognosis.

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Primary Ewing sarcoma of the uterus: a case report

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Background: Extraskeletal Ewing sarcoma is a rare, malignant soft tissue neoplasm primary affecting children, adolescents and young adults. Primary Ewing sarcoma of the uterus is an extremely rare entity with characteristic microscopic and genetic features and an aggressive clinical course.
Aims: We present the case of a 29-year-old female who underwent elective hysterectomy for menorrhagia causing symptomatic anaemia. Macroscopic examination revealed a necrotic myometrial mass which, on histopathological examination, was found to be a primary uterine Ewing sarcoma.
Methods: The patient underwent elective hysterectomy. The tumour was diagnosed using a combination of routine H&E stained sections, immunohistochemistry including NKX2.2, CD117, Cyclin D1, CD99 and Fli-1 and fluorescence in situ hybridisation, which detected rearrangement of the EWSR1 gene region.
Results & Conclusions: This case demonstrates a rare case of primary uterine Ewing sarcoma in a young patient. Due to the rarity of these tumours, a standard treatment regime is yet to be established. The tumour showed characteristic histological and immunohistochemical features and a pathognomonic EWSR1 translocation. Although rare, this case illustrates the need to consider Ewing sarcoma in the differential diagnosis of poorly differentiated round cell malignancy in the uterus.

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A review of the main placental histopathological findings in SARS-CoV-2 infection: analysis of COVID 19 positive patients–single center experience

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Background: COVID-19, the disease caused by the novel coronavirus SARS-CoV-2, is a severe systemic thrombotic syndrome that emerged in 2019, with an ensuring pandemic. In so far postulated available literature there is a lack of clarity on the exact mechanism how the SARS-CoV-2 virus acts on the placenta. There is a direct effect on the placenta which leads to hypoxia and an indirect effect that is reflected through proinflammatory responses.
Aims: To emphasize the spectrum of histopathological and transmission electron microscopy changes in the placenta of COVID infected pregnant women.
Methods: The current study was designed as a prospective study on 39 pregnant women with SARS-CoV-2 confirmed infection on nasopharyngeal samples. Gross dissection sampling was performed according to Amsterdam Placental criteria. The standard procedure of paraffin embedded section, stained with H&E was routinely used. Moreover the tissue was stained with immunohistochemistry to present the inflammatory response of the placenta, with the following antibodies: CD3, CD20 and CD68.

Results & Conclusions: Histological studies of placental tissue revealed the presence of maternal vascular malperfusion (MVMs) or foetal vascular malperfusion (FVMs) lesions and mild inflammatory lesions. The most prevalent histopathological changes were decidual arteriopathy and increased perivillous fibrin deposition.
Ultrastructural analyses showed spherical-like coronavirus particles with an electron intermediate-density core as well projections from the surface as spike-like structures in the syncytiotrophoblasts.
In conclusion, there are significant histomorphological changes that indicate maternal malperfusion.

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Chorangioma of placenta: single center analysis

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Background: The most common benign neoplasms of the placenta are non-trophoblastic tumours. They include chorioangioma, teratoma, leiomyoma and hepatocellular adenoma. Chorioangioma is the most common subtype. The incidence of chorangioma is 0.5–1.0%. Small chorangiomas are clinically insignificant. Giant chorioangioma is rare tumours, measuring more than 4 cm in diameter and seen in association with elderly primi, twin pregnancy, hypertension, diabetics, and female fetus. Giant chorioangioma is associated with complications that can affect the mother, fetus, or neonate.
Aims: This is a retrospective study of chorangioma cases seen at Institute of Pathology, Medical faculty, Skopje during a 10-year period from 2012 to 2021.
Methods: Macroscopic findings, gestational weeks at delivery, maternal age and outcome of pregnancy were evaluated. Histological and immunochistochemical analyses of the placental chorangiomas were preformed.
Results & Conclusions: In period of 10 years 6 causes of placental chorangioma were clinically identified and histopathologically confirmed. Four cases were giant chorangiomas measuring from 8 to 13 cm. One of the cases was identified as chorangioma of the umbilical cord. Three of the cases shows potential maternal risk factors like primary infertility, extreme obesity and post COVID status.
The median gestational age of delivery was 33 + 6 weeks and 39.6 weeks, respectively. The maternal age range was between 25 to 34 years.
Four of the pregnancies had favourable outcome with no complications during and after birth. One was with foetal distress and one with premature delivery.
Microscopic examination of the mass showed numerous proliferative thin walled capillaries lined by flattened endothelium and separated by fibrous stroma. This was further confirmed by IHC for CD34, which showed strong reactivity of endothelial cells.

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Performance of intra operative frozen section of ovarian tumours: a 10-year experience

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Background: Ovarian tumours are a frequent and lethal disease occurring in women of all the age, especially between 50 and 70 years. Its diagnosis is often late. Intra operative frozen section is a rapid and accurate exam performed to determine the category of ovarian tumours and guide surgical management.
Aim: The aim of our study is to evaluate the performance of intra operative frozen section of ovarian tumours for a 10-year experience.
Methods: A retrospective study of 327 patients who underwent intra operative frozen section of ovarian tumours over 10 years between 1st January 2009 and 31 December 2019 in Farhat Hached University Hospital in Sousse, Tunisia.
Results and conclusion: The mean age was 49 ± 15 years. Abdominal mass was the most common symptom. The overall accuracy of intra operative frozen section to determine the diagnosis was 84.71%. The sensibility, specificity, positive and negative predictive value for benign tumours, borderline tumours and malignant tumours were 98.77%; 87.07%; 89.44% and 98.46%, 80.43%; 94.7%; 72.55% and 96.52% and 78.22%; 100%; 100% and 90.47% respectively.
In conclusion, intra operative frozen section is an accurate and rapid test with a high sensibility and specificity, performed to appreciate the nature of ovarian tumours and to determine the extent of

surgery, therefore avoiding unnecessary operation for benign tumours and preventing the requirement of restaging managements in early-stage cancers. However, the final histological diagnosis remains the gold standard.

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Mucosal melanoma of the vagina and cervix

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Background: Cancer of the uterine cervix is one of the leading causes of cancer-related deaths in women worldwide. Melanomas are malignancies that arise from melanocytes in the basal layer, most commonly of cutaneous origin. Gynecologic melanomas are extremely rare malignancies, and primary malignant melanoma of the cervix is the rarest among them all, with less than 100 cases reported so far. Although some conditions have been correlated with the pathogenesis of this entity, no specific risk factor has been yet identified, with vaginal bleeding being the most common symptoms. The diagnosis is based on physical examination with speculum assessment and cytologic and histopathologic findings accompanied with immunohistochemical staining of lesion's biopsies.
Aims: To describe one case of mucosal melanoma of the vagina and cervix in 67 years old female.
Methods: The patients present with vaginal bleeding and a mass round 1.5 cm with speculum examination. Radiological examination showed mass on vagina and cervix region. Histopathological examination showed solid, nodular and diffuse pattern with large pleomorphic epithelioid nuclear, vesicular chromatin and prominent nucleoli with melanin production. Imunohistochemical examination showed positivity with HMB45 and S100 markers.
Results & Conclusions: To illustrate mucosal melanoma of the vagina and cervix, a rare case of a mucosal melanoma of the vagina and cervix in a 67 year old female as well as a literature review was presented. Diagnosis was based on clinical features, ultrasonographic as well as histopathological dan immunohistochemical examination. Current treatment options in this patient are based on surgical excision mostly with radical hysterectomy and prognosis is poor than cutaneous melanoma.

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Correlation between PD-L1 expression and clinico-pathological features in patients with ovarian surface epithelial tumours

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Background: Ovarian carcinomas (OCs) account for a significant cancer related deaths in women and has the highest death rate of cancers of female reproductive organs. Programmed cell death protein 1 (PD1), plays an important role in down-regulating the immune system by preventing the activation of T-cells, which in turn weakens autoimmunity and promotes self-tolerance. The programmed death ligand-1 (PD-L1) is a transmembrane protein that have been shown to play a major role in tumoral escape from the host immune system by interacting with the PD-1.
Aims: The main aim was to evaluate PD-L1 immunohistochemical (IHC) expression in different primary surface ovarian epithelial tumours and to correlate with various clinicopathological parameters as well as with the expression patterns of a p53, oestrogen receptor (ER) and progesterone receptors (PR).
Methods: The study included samples from 102 patients with primary surface ovarian epithelial tumours (benign, borderline and malignant) and a Tissue Micro Array (TMA) was constructed. Immune staining for PD-L1, P53, ER and PR was performed. The results were interpreted and correlated with the clinicopathological parameters.
Results & Conclusions: PDL1 was expressed in 51.4% of malignant tumours. A significantly PDL1 expression was detected in the malignant group compared to others. There is a significant correlation between PD-L1 expression and P53 status and with positive hormonal receptor status either positive ER or PR. compared to borderline and benign lesions. No significant correlation was observed between PD-L1 expression and the different clinicopathological parameters. In conclusion, PD-L1 is expressed in a significant proportion of malignant primary surface epithelial tumours and this was significantly correlated with P53 status and with positive hormonal receptors. The results may shed lights on the potential role of PD-L1 to define patients' prognosis and to identify those who might benefit from adding immunotherapy to their treatment plans.

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Metastatic high grade immature teratoma of the ovary in a lymph node of a young child: a case report

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Background: Immature teratoma is a malignant germ cell tumour, of no known causative agents, composed of cells from the three germ layers, containing variable amounts of mature and immature tissue. Immature teratomas constitute about a third of malignant germ cell tumours and the mean age at diagnosis is 20.6 years. The prognosis heavily depends on the International Federation of Gynaecology and Obstetrics (FIGO) staging system and is influenced by factors such as cell type, tumour grade, capsular rupture, and metastatic risk factors.
Aims: This is a rare case study of metastatic high grade immature teratoma of the ovary in lymph node of a young child.
Methods: A 12-year-old female patient who presented with abdominal distention for 2 months associated with intra-abdominal mass, ascites and inguinal lymphadenopathies. Laparotomy was done and found a large solid right ovarian mass filling the abdomen and reaching the liver with metastatic disease to the omentum, cul de sac, hepatic flexure peritoneum and interaortocaval two nodes each about 3x2 cm right salpingo-oophorectomy, para-aortic lymph node dissection and peritoneal disease resection was done.
Results & Conclusions: Grossly, it was an ovarian tumour, omental nodules and peritoneal lymph nodes. Haematoxylin and eosin stained sections from all of the specimens show variable amounts of mature elements from all three germ layers, admixed with immature elements, mostly neuroectodermal with rosettes and pseudorosettes formation occupying multiple low power fields in any slides consistent with high grade immature teratoma of the right ovary metastatic to the peritoneal lymph nodes.
This case's importance lies in its rarity because fewer cases of high grade immature teratoma with lymph node metastases are noted in the world's literature. Furthermore, this is the first reported case of this type in Rwanda.

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The diagnostic concordance between cervical biopsy and LLETZ specimens: a clinical audit at a rural Anatomical Pathology Department (Tamworth)

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Background: Cervical biopsy plays an important role in the assessment and management of squamous intraepithelial lesions (SIL), reducing unnecessary intervention and positive margin rates.
Aims: To conduct a retrospective clinical audit that evaluates the histopathological diagnostic concordance between cervical biopsy and large loop excision of the transformation zone (LLETZ) from 2021 at the Tamworth Anatomical Pathology department.
Methods: A search was conducted in Auslab for histopathology reports on LLETZ specimens received at the Tamworth Anatomical Pathology department in 2021. Clinical data were extracted, including demographics, medical history, human papilloma virus (HPV) status, colposcopy findings and histopathology findings. The data were analysed by calculating simple percentages to summarize: (1) the patient baseline characteristics, (2) the degree of diagnostic concordance between biopsy and LLETZ and (3) whether diagnoses were upgraded or downgrades in cases of discordant histopathology results.
Results & Conclusions: A total of 93 cases were identified. The mean patient age was 43.2, 15.1% were Aboriginal or Torres Strait Islander, 12.7% were immunosuppressed and 51.4% were smokers. Most patients were positive for HPV, most commonly HPV other only (46.0%), followed by HPV 16 only (33.3%). 41.9% of patients had no dysplasia on the LLETZ diagnosis, 36.6% had high-grade SIL (HSIL) and 10.8% had low-grade SIL (LSIL). The overall diagnostic concordance between biopsy and LLETZ was 66.7%. Concordance was higher in those with HSIL, with 74.2% concordance compared to 50.0% concordance for those with LSIL. Discordant results were mostly downgrades (28.6%). Possible reasons for discordance include regression/progression of the lesion, post-biopsy inflammation, overcalled diagnosis on biopsy and inadequate specimens. Concordance rates from this audit mirrored figures reported in the literature

(42–86%), including that high-grade lesions generally had better concordance rates. Cervical biopsy is therefore a sufficiently accurate way to diagnose SIL.

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Prevalence and genotype of HR-HPV in cervical smears in Sokoto, north-western Nigeria: a sentinel study to guide vaccination

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Background: Cancer of the cervix uteri is the most common gynaecological cancer and a leading cause of cancer mortality among women in developing countries, Nigeria inclusive, and it has been linked to infections with high-risk HPV.

Aims: This study is aimed at estimating the prevalence of infection with high-risk HPV in cervical smears due to paucity of data in the study population in Sokoto.

Methods: This is a descriptive prospective cross-sectional observational study; relevant information was obtained through personal interviews with structured questionnaire. Samples were collected from 84 consented patients who visited the clinic during the study period. LBC smear was obtained and smear results were classified using the Bethesda System of classification, 2001. Hybribio 21 HPV Geno array test kit with polymerase Chain Reaction for the HPV DNA detection was used.

Results: Out of 84 samples tested for HR-HPV, 72 (88.9.%) cases were negative, while 12 cases were positive for HR-HPV constituting 14.3% of the cases. The HR-HPV were seen more among the age group of 25–30 years (33.3%). Negative cases were seen more among 35–40 (19.4%) age group. The genotypes identified were 16,18,31,33,39,45,51,52 and 58 respectively. Out of the 12 positive cases three of the cases shows co-infections with HR-HPV (16 & 52, 31 & 33, and then 39 & 51 respectively) and single infection by the 13,31,45,52, and 58 respectively. Three cases each were infected by HR-HPV 13 and 58 hence the most common infections, followed by HR-HPV 31 and 52 infecting two cases each and the remaining (16,33,39,45,51), one case each.

Conclusion: This study shows that HR- HPV 13 and 58 are the most common types followed by HPV 31 and 52 in our environment. High prevalence of HR-HPV may be a distinctive feature of our population. Therefore, further studies need to be done to expand the population size in other to objectively relate the HR-HPV genotypes in our population to commercially available vaccine types for appropriate vaccination program implementation in Sokoto.

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Inflammatory leiomyosarcoma of the uterus: a case report of a rare entity

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Background: Inflammatory leiomyosarcoma (ILMS) is a rare, malignant, atypical myogenic neoplasm characterized by smooth muscle differentiation, a prominent inflammatory infiltrate and near-haploidisation.[1] It is a distinct clinical entity predominantly affecting the young to middle-aged population and has a male preponderance.[2] First described by Merchant *et al.* in 1995, there have since been less than 30 cases of ILMS reported in literature; thus, each new case presents a valuable opportunity to broaden our understanding of this rare entity.[3,4]

Aim: To expand our understanding of ILMS through discussion of an unpublished case.

Case: We present the case of a 32-year-old nulliparous female who presented with symptomatic anaemia, which manifested as syncopal episodes and heavy menstrual bleeding requiring blood transfusion. Relevant clinical history includes known

leiomyoma and irregular, abnormal menstruation requiring tranexamic acid and norethisterone. Formal pelvic ultrasound and MRI revealed a well-defined, encapsulated, heterogeneous intramural fibroid. Subsequent abdominal myomectomy showed a well-circumscribed atypical smooth muscle tumour, largely replaced by pleomorphic spindle cell proliferation, seen invading into surrounding myometrium in a broad pushing pattern. Prominent inflammatory infiltrate and multiple foci of multinucleated tumour giant cells with moderate to severe nuclear atypia were identified. Up to 4 mitotic figures/10 high power field were also seen, including an atypical mitosis, and the interspersed veins contained thrombi.

Methods: The tumour showed strong positivity for smooth muscle markers of desmin and SMA. MyoD1 showed focal staining, however myogenin appeared negative. Further immunohistochemistry including ALK1, DOG1, HMB45 and SOX were negative, excluding other spindle cell neoplasms.

Results & Conclusion: It is important to consider ILMS as a differential diagnosis in myogenic tumours with atypical morphology, as they can be erroneously over-diagnosed as high-grade sarcomas. Typically, ILMS follows an indolent clinical course and is associated with a favourable prognosis, though long-term follow-up studies are lacking.[2,5]

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TSSC3, RB1 and KLF14 expressions in complete and partial hydatidiform mole

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Background: The distinction between complete (CHM) from partial (PHM) hydatidiform mole is a diagnostic challenge without the utility of ancillary study, due to overlapping histomorphologic features. Its distinction is important in predicting the risk of recurrence and malignant transformation. Currently, a paternally-imprinted p57 antibody is commonly used to distinguish CHM from PHM. There are other paternally-imprinted genes such as Tumour-Suppressing Subchromosomal Transferable Fragment Candidate Gene 3 (TSSC3/ PHLDA2), RB transcriptional corepressor 1 (RB1) and Kruppel like factor 14 (KLF14).

Aims: This study aims to determine the diagnostic utility of paternally-imprinted gene-derived immunomarkers to differentiate the CHMs from PHMs.

Methods: A total of 61 histology samples consisting of 29 CHMs, 15 PHMs, and 17 non-molar abortus (NMAs) were subjected to immunohistochemical staining of 3 antibodies of paternal-imprinted genes, namely TSSC3, RB1 and KLF14. The diagnosis of all cases was validated by p57 antibody and DNA ploidy analysis.

Results & Conclusions: TSSC3 immunoreactivity was undetectable in majority of CHM (25/29, 86.2%). In contrast, TSSC3 was detected in the cytoplasm of cytotrophoblasts in 80% (12/15) of the PHMs ($P < 0.0001$) and 88.2% (15/17) of the NMAs ($P < 0.0001$). Strong RB1 expression was observed in the nuclei of cytotrophoblasts in 80% (12/15) of PHMs and 58.8% (10/17) of NMAs, while CHMs demonstrate weak RB1 staining in 86.2% (25/29) cases. KLF14 expression was found in all cases of

CHM, PHM and NMA. In conclusion, TSSC3 and RB1 antibodies may be used as an adjunct to p57 antibody in distinguishing CHM from PHM, in particularly where p57 staining is equivocal or discordant. A study with larger sample size is needed to further establish the importance of TSSC3 and RB1 as biomarkers.

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Pregnancy loss assocaited with massive perivillous fibrin deposition and maternal systemic lupus erythematosus – a case report with review of literature

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Background: Massive perivillous fibrin deposition (MPFD) defined as significantly increased fibrin deposition within the placental parenchyma. MPFD is a rare lesion with an estimated incidence of <1 percent in all pregnancies and is associated with high rates of adverse pregnancy outcomes. There is no agreed upon the pathogenesis, but hypotheses suggest blood flow stasis in the intervillous space, procoagulant effect and trophoblastic pathology which cause interruption of maternal-fetal perfusion.

Aims: We present a case of a MPFD from a placenta of second trimester pregnancy loss at 17 weeks gestational age.

Methods: MPFD was diagnosed using standard diagnostic criteria on macroscopic and microscopic examination. A literature review using Ovid-Medline was undertaken to identify case reports and large series with similar cases.

Results & Conclusions: The mother had a clinical history of systemic lupus erythematosus (SLE) with antiphospholipid antibody syndrome. She also had a high BMI, presented with deep vein thrombosis and was on long term anticoagulation.

Sections of the placenta showed features of massive perivillous fibrin deposition occupying greater than 70% of the disc. The entrapped viable villi in the viable parenchyma showed features of suggestive of maternal vascular underperfusion. This report highlights a case of maternal lupus with associated antiphospholipid antibody syndrome as a potential causative factor for MPFD and subsequent pregnancy loss.

The incidence of adverse pregnancy is reported to be very high in placenta with MPFD where the extent of fibrin deposition is severe as seen in the present case. These cases are known to be associated with autoimmune disease in the mother. Recognition of this entity is important since it is known to have a high recurrence rate in subsequent early pregnancies and its incidence could potentially be reduced with treatment.

References

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