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EFFECTIVENESS OF CORE-NEEDLE BIOPSIES IN THE DIAGNOSIS OF LYMPHOMA: A RETROSPECTIVE AUDIT

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The gold standard for diagnosing and classifying lymphomas is excisional biopsy, however there is a growing trend towards the use of core needle biopsies (CNBs). Because CNB produces only a small amount of tissue and represents a limited sample of the overall tissue architecture, it may not be an appropriate sampling modality for use in patients with suspected lymphomas. To examine the diagnostic utility of CNBs, a retrospective audit was performed covering all CNBs performed over 2019–2020 where lymphoma was likely or formed part of the clinical differentials. A complete diagnosis and/or classification was able to be made on 62% of the reviewed cases, with a further 16% providing a partial or indeterminate diagnosis. While it is important to recognise the limitations of CNBs, these results suggest that they represent a reasonable initial sampling modality in the investigation of lymphoma.

TESTICULAR PLASMA CELL NEOPLASM WITH PLASMABLASTIC FEATURES – A CASE REPORT

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The most common primary adult haematolymphoid malignancy of the testis is diffuse large B cell lymphoma (DLBCL), and other haematolymphoid tumours are not commonly seen in daily practice. Plasmablastic lymphoma (PBL) of the testis is a rare aggressive entity that is typically seen in immunodeficient patients, and commonly stain for plasma cell markers. Testicular plasmacytomas are also uncommon and mainly affect adult men who have been diagnosed with, or subsequently develop, plasma cell myeloma. This case study reports a patient with known multiple myeloma who presented with a two-month history of an enlarging right testicular mass. The tumour was composed of atypical plasmacytoid lymphoid cells with abundant mitoses. Additionally, both morphological and immunohistochemical plasmablastic features were noted. This case highlights the importance of correlating histological, radiological, biochemical and clinical findings to reach a diagnosis.

RETROPERITONEAL LEIOMYOMA – A CASE REPORT

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Leiomyomas are benign tumours of smooth muscle. Uterine leiomyomas are the most common neoplasm in women but they can occur in other sites including skin, nipples, scrotum and labia. They rarely occur in deep soft tissues and can be a diagnostic dilemma. We report a case of a 53-year-old woman with an 85 mm retroperitoneal leiomyoma as an incidental finding on an abdominal ultrasound. The histology showed a well-circumscribed benign appearing undifferentiated spindle cell tumour. A panel of immunohistochemical stains and fluorescence in situ hybridisation studies showed features supporting a diagnosis of benign leiomyoma. Solitary lesions such as this are easily cured with surgical excision.

A RARE CASE OF TUMID LUPUS ERYTHEMATOSUS IN A PATIENT WITH FABRYS DISEASE – CASE REPORT

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Tumid lupus erythematosus (TLE) is a rare subtype of chronic cutaneous lupus, typically presenting as a photosensitive erythematous and oedematous plaque devoid of papulosquamous features.¹ Contrary to the other subtypes of cutaneous lupus erythematosus, TLE is rarely associated with systemic lupus erythematosus and thus has a relative lack of serological abnormalities. In the following case, we describe an individual with a history of Fabry's disease, on immunosuppressive therapy, with a subsequent TLE lesion on his left forearm, confirmed histologically.

Although there is no literature to-date on the coexistence of these two conditions, it is important to raise awareness of this possible occurrence to ensure that timely diagnosis and appropriate management can ensue.

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UNDERSTANDING THE TUMOUR IMMUNE MICROENVIRONMENT OF STAGE III COLORECTAL CANCER USING MULTIPLEXED IMAGING MASS CYTOMETRY

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Background/Aim: The tumour immune microenvironment is spatially heterogeneous and plays a crucial role in cancer progression and response to therapy. Current histopathological

examination cannot comprehensively assess the molecular heterogeneity in the tumour microenvironment. We aim to capture tissue morphology and single cell protein expression of cancer and immune cells within intact tissue sections of stage III colorectal tumours from 11 patients.

Methods: Using Hyperion Image Mass Cytometry (IMC), we simultaneously profiled 16 protein markers from FFPE samples, including cancer (Ki-67, p53) and immune (CD3, CD4, CD8a, CD45RO, CD20, CD68, Granzyme B) cell markers. We integrated this with matched histopathological imaging and whole-exome-sequencing data.

Results: We identified seven cancer, immune and stromal cell types and preserved their spatial organisation within the micro-environment. These cell types were validated on matched H&E histopathology. We found significant interactions of cancer cells with NK-cells and B-cells. Furthermore, we found that tumours with 17p deletion had significantly fewer NK-cells.

Conclusion: Using IMC to acquire rich spatial data at single-cell resolution enabled us to assess the heterogeneity of tumour tissue by defining cell types, immune infiltration, and cancer-immune cell interaction within intact tissue sections. Integration of this data with H&E images could assist pathologists in cancer diagnosis.

GASTRIC EPITHELIAL ATYPIA ASSOCIATED WITH RADIATION

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Aim: Radiotherapy is widely accepted treatment in advanced cancer with a high risk of local recurrence. Radiation induced cancers are well described, however less attention has been given to non-neoplastic mucosa. Our aim is to provide a detailed analysis of morphological features present in non-neoplastic mucosa in order to avoid misdiagnosis.

Method: We reviewed the case of 74 years man with a history of unknown primary and documented bony metastasis, presented with gastric ulcer, for which histological examination along with immune-histochemical (IHC) analysis was performed.

Results: Histology, mucosal ulceration, acute inflammation, eosinophilic infiltrates and architectural abnormalities. Epithelium atypia had a lower nuclear: cytoplasmic ratio, aiding distinction from dysplasia. IHC for cytokeratin and viral inclusions was done. Further work-up on the case revealed that the medial part of the stomach was in the radiation field, which helped to reach the final diagnosis of radiotherapy induced atypia.

Discussion: The gastrointestinal (GI) tract, particularly the bowel, is very vulnerable to radiation damage because of the anatomical location and the high cell turnover. Radiation induced changes resemble dysplasia, viral cytopathic and in chronic cases many resemble IBD. Confident diagnosis can be made in conjunction with detailed history, histology and IHC.

'FIJI BELLY' CULMINATING IN COLECTOMY: A CASE REPORT FROM NEW ZEALAND WITH BRIEF REVIEW OF LITERATURE

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Traveller's diarrhoea due to *Entamoeba histolytica* is a world-wide problem due to growing popularity of international travel to exotic locations. Acute fulminant or necrotising amoebic colitis is a rare but potentially fatal complication of intestinal amebiasis, reported in only less than 0.5% of cases.

We report the case of a 55-year-old male who became unwell after travelling to a rural area in Fiji. He was initially treated as diverticulitis and subsequently had appendectomy due to suspected appendicitis. Symptoms persisted and subsequent colonic biopsies revealed features of acute colitis and revealed no microorganisms. Patient was treated for inflammatory bowel disease with Pentasa and prednisone, but continued to deteriorate. Fulminant colitis was suspected based on imaging findings and a subtotal colectomy was performed. Histopathological examination revealed flask shaped ulceration and areas of necrosis containing abundant microorganisms morphologically consistent with *Entamoeba*. Patient recovered well after antiamebic medication.

GASTRITIS CYSTICA POLYPOSA IN AN UNOPERATED STOMACH, A CASE REPORT

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Gastritis cystica polyposis (GCP) is a rare benign hyperplastic polypoid neoplasm that usually occurs on the gastric side of anastomoses in patients who have previously undergone gastroenterostomy surgery. Only few cases of GCP have been reported in a previously unoperated stomach. Here we present a 73-year-old female who on investigation for altered bowel habits was found to have a gastric polyp diagnosed as GCP. Both endoscopic and radiological findings are non-specific, and diagnosis depends on histopathological evaluation of the lesion. Histologically the lesion showed a hyperplastic polyp with cystically dilated foveolar and glandular epithelium extending into the submucosa surrounded by disorganised bundles of smooth muscle and without any evidence of cytologic atypia, typical of GCP. Although benign, an associated with gastric carcinoma has been described.

SEX CORD TUMOUR WITH ANNULAR TUBULES

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Sex cord tumours with annular tubules are a rare but distinct variant of sex cord stromal tumours, first described by Scully in 1970.¹ A third of cases are found in patients with Peutz-Jeghers syndrome (PJS) whilst the remaining arise sporadically.² Sporadic SCTATs are unilateral, larger and not calcified as opposed to PJS associated lesions which are multiple, small, bilateral and calcified.^{1,3} Sporadic tumours have a greater metastatic potential than their syndromic counterpart. Histologically, sporadic lesions show more differentiation into Granulosa and Sertoli cell