recurrences were detected among the remaining patients during the follow up period.

Conclusions: Our series suggest that recurrence can occur in extrapleural SFTs even with low risk features. The treatment of choice is complete resection followed by extended follow-up surveillance.

125. MUSCLE PATHOLOGY: TEACHING OPPORTUNITIES AND STRATEGIES IN A PATHOLOGY DEPARTMENT IN SINGAPORE

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Background: Muscle pathology is a highly sub-specialized discipline in histopathology. While it does not generally feature prominently in routine histopathology practice or in fellowship or board examinations, some training exposure to the discipline for histopathology trainees is often deemed desirable.

In Singapore, histopathology trainees are given exposure to the discipline through sessions in the national training programme, intradepartmental neuropathology teaching as well as opportunistically during work at pathology departments.

Implementation: During recent national training programme teaching sessions, muscle pathology was introduced via a lecture on the general approach to muscle biopsy interpretation and a separate presentation of short clinico-pathological cases with quizzes. Conditions covered include muscular dystrophy, mitochondrial myopathy, central core myopathy, glycogen storage disease, polymyositis, disuse atrophy and neurogenic atrophy.

In our department, trainees undertake structured training in the major subspecialties of histopathology, including neuropathology. They receive weekly illustrative slides for preview, culminating in a multi-header teaching session with the teaching pathologist. For neuropathology, a session on muscle pathology is included.

During routine pathology work, muscle biopsies are channeled to the subspecialty pathologists for reporting. When interesting or diagnostically-typical cases are encountered, they are shared with trainees and interested colleagues.

Conclusions: Through the above teaching opportunities, trainees acquire a working knowledge of muscle pathology. From informal feedback, they appear to particularly like the case-based quiz teaching format. Many feel the discipline is relevant to their overall training in histopathology while some, if given the opportunity, may consider developing subspecialty interest in muscle pathology, auguring well for the future of the discipline.

126. PATHOLOGY OF SURGICALLY EXCISED PRIMARY CARDIAC TUMORS: A REVIEW OF 39 YEAR SINGLE INSTITUTION EXPERIENCE

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Background: Primary cardiac tumors are uncommon clinical entities, and thus, there are relatively limited descriptions in the published literature.

Aims: Most of these tumors have nonspecific presentations and thus, a clinico-pathologic review may provide additional information of potentially practical value for relevant clinical diagnosis and future translational researches.

Method: The surgical pathology files spanning a 39-year period (1975–2014) were reviewed for all surgically excised cardiac tumors. There were 353 of 357 (98.9%) cases that were clinically established as primary.

Results: Of 353 primary cardiac tumors, 327 (92.6%) were classified as benign, while 26 (7.4%) were classified as malignant. There was female sex predilection for both benign and malignant tumors with a male to female ratio of 1:2.8. Of the benign tumors, the 5 most common histologic types were myxoma (95.1%), fibroma (1.2%), rhabdomyoma (1.2%), hemangioma (0.6%), and leiomyoma (0.6%). The locations in decreasing frequency were left atrium, right atrium, left ventricle, and right ventricle. Tumor sizes ranged from 0.4 to 8.7 cm. The average age of patient was 51.4 years. Among the malignant tumors, the 5 most common histologic types were myofibroblastic sarcoma (15.4%), undifferentiated sarcoma (15.4%), angiosarcoma (11.5%), malignant fibrous histiocytoma (11.5%) and rhabdomyosarcoma (11.5%). Locations in decreasing frequency were left atrium, right atrium, right ventricle, ventricle and atrium, biventricular, and biatrial. Tumor sizes ranged from 0.8 to 10.6 cm. Average age of patients was 39.8 years.

Conclusions: In this series, primary cardiac tumors generally have significant female sex predilection. Primary malignant cardiac tumors however occurred in a relatively younger age group than their benign counterparts.

127. GENOMIC AND IMMUNOHISTOCHEMICAL PROFILES OF ENTEROPATHY-ASSOCIATED T-CELL LYMPHOMA IN JAPAN

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Background: Enteropathy-associated T-cell lymphoma (EATL) is a rare primary T-cell lymphoma of the digestive tract. EATL is classified as either Type I, which is frequently associated with and thought to arise from celiac disease and is primarily observed in Northern Europe, and Type II, which occurs *de novo* and is distributed all over the world with predominance in Asia. Its pathogenesis in Asia is unknown.

Aims: We aimed to clarify the histological and genomic profiles of EATL in Japan in homogeneous series of 20 cases.

Methods: The cases were characterized by immunohistochemistry, high resolution oligonucleotide microarray, and fluorescence *in situ* hybridization (FISH) at 5 different loci: 1q21.3 (*CKS1B*), 6q16.3 (*HACE1*), 7p22.3 (*MAFK*), 9q33.3 (*PPP6C*) and 9q34.3 (*ASS1*, *CARD9*) using FFPE sections.

Results: The histological appearance ranged from medium- to large-sized cells in 13 cases (65%), small-to-medium-sized cells

in 5 cases (25%), and medium-sized in 2 cases (10%). Results of immunohistochemistry were CD2 (60%), CD3ε (100%), CD4 (10%), CD7 (95%), CD8 (80%), CD56 (85%), TIA-1 (100%), Granzyme B (25%), TCRβ (10%), TCRγ (35%) and TCRγδ (50%). Double negative for TCR was found in 6 cases (30%). All cases were EBER-. The genomic profile showed recurrent copy number gains of 1q32.3, 4p15.1, 5q34, 7q34, 8p11.23, 9q22.31, 9q33.2, 9q34.13, and 12p13.31, and losses of 7p14.1. FISH showed 15 patients (75%) with a gain of 9q34.3 with good correlation with aCGH.

Conclusions: EATL in Japan is characterized by non-mono-morphic cells with a cytotoxic CD8+CD56+ phenotype similar to EATL type II. The genomic profile is comparable to EATL of Western countries, with more similarity to type I (gain of 1q and 5q) rather than type II (gain of 8q24, including MYC). The 9q34.3 gain was the most frequent change confirmed by FISH irrespective of the cell of origin of αβ-T cells and γδ-T cells.

128. BILATERAL ORBITAL PARANGLIOMA: A REPORT OF A UNIQUE CASE AND UPDATES ON ITS CLINICOPATHOLOGICAL FEATURES

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Background: Orbital paraganglioma is a rare neuroendocrine neoplasm. The aim is to report a unique case of bilateral orbital paraganglioma and to systematically review the literature for clinicopathological features.

Methods: The unusual clinical presentation of a case of orbital paraganglioma was presented. In addition, a systematic review of the literature on orbital paragangliomas reported in the English literature was performed.

Results: A one-year-old Malay girl presented with bilateral leukocoria since 5 months of age with deterioration of vision. The clinical diagnosis of bilateral retinoblastoma was made. Chemotherapy was commenced before the left eye enucleation. Histopathological examination showed that the tumour was positive for neuroendocrine markers (synaptophysin, chromogranin and CD56) and negative for other markers (cytokeratins [AE1/3, CAM 5.2], vimentin, myogenin and GFAP). The morphology and immunohistochemical findings of the tumour were consistent with paraganglioma. A search of the literature revealed 29 cases of orbital paragangliomas and the present case was the youngest case being reported. The mean age at presentation of patients with orbital paraganglioma was 37. There was female preponderance (M:F=1:1.6) and slightly left laterality (R:L=1:1.2). Proptosis was the main presentation (79%). Surgical excision only through orbitotomy was the most preferred modality (62%) with 86% of them resolved without metastases or recurrence.

Conclusion: Paraganglioma of the orbit presented with bilateral leukocoria mimics retinoblastoma is very unusual. Detailed discussion on its clinicopathological characteristics may increase the understanding towards the correct diagnosis and the best therapeutic options.

129. HETEROTOPIC PANCREATITIS COMPLICATED WITH SEPTIC SHOCK: AN UNUSUAL PRESENTATION

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Background: Heterotopic pancreas is defined as pancreatic tissue lacking anatomic or vascular communication with normal body of the pancreas. This entity is rarely symptomatic. The aim is to report an unusual presentation of inflamed heterotopic pancreas complicated with shock and multi-organ failure

Methods and result: A 62-year-old female presented with abdominal pain for one week duration associated with early satiety and repeated post-prandial vomiting. The biochemical tests were within normal range apart for the slight raised in serum amylase. CT scan of the abdomen and oesophagogastroduodenoscopy (OGDS) revealed a circumferential mass at the first part of the duodenum. Several days later, she presented with sign and symptom of shock. She was lethargic, impaired consciousness and had a poor oral intake. The blood pressure was 90/70 mmHg and the pulse rate was 120 beats/minute. The endoscopic biopsy result showed an inflamed heterotopic pancreas. Her condition deteriorated and subsequently died due to multi-organ failure.

Conclusion: Heterotopic pancreatitis presented with para-duodenal mass and complicated with shock is extremely rare. There is a potential of lethal complications when acute inflammation was noted in heterotopic pancreas.

130. MICRORNA-320d INHIBIT PROLIFERATION ABILITY OF DLBCL CELLS BY TARGETING CDK6

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Background: DLBCLs can be divided into two subgroups: germinal center B-cell (GCB) type and non-germinal centre-like (non-GCB) type; yet even within each subgroup, there are still wild variations in molecular characteristics and prognosis due to the heterogeneity.

Aims: To investigate the impact of miR-320d overexpression on DLBCL cell proliferation and analyze the possible molecular mechanism.

Methods: The target gene of miR-320d was predicted by TargetScan, miRanda and miRDB software analysis. The stably expressing miR-320d and CDK6-shRNA DLBCL cell lines (OCI-LY1) was created using lentiviral transduction. The CDK6 mRNA and protein levels were tested using qRT-PCR and western blotting, respectively. The proliferation ability of OCI-LY1/miR-320d and OCI-LY1/CDK6 shRNA cell lines was performed using CCK-8 experiments. In addition, Dual-luciferase reporter vectors were also constructed to detect the direct regulation of miR-320d target CDK6.

Results: miR-320d was predicted to target CDK6. miR-320d can inhibit the expression of CDK6 mRNA in OCI-LY1 ($p < 0.05$).