pulmonary cystic lesions which have been stable in size radiologically. The only past surgical history was a hysterectomy which was performed for menorrhagia 16 years before this presentation. Since then she had a lung biopsy reported as congenital cysts or large foci of paraseptal emphysema. Given the cause of the underlying cystic lung disease being unclear and her clinical deterioration with multiple pneumothoraces and dyspnoea, once more a VATS-guided lung biopsy was performed to establish a tissue diagnosis.

Results and conclusions: This biopsy showed patchy interstitial fibrosis with many cystic spaces distributed throughout the lung, some of which had a thickened and expanded wall. These thick-walled spaces were due to proliferation of small ovoid cells with scanty clear cytoplasm and bland ovoid nuclei lacking pleomorphism or atypia. On immunohistochemical studies, these bland ovoid cells were positive for oestrogen and progesterone receptors, as well as Vimentin, CD10 and WT1, all in keeping with a metastatic low grade endometrial stromal sarcoma (LGESS). Further searching her medical records revealed that her past hysterectomy was due to a uterine low grade endometrial stromal sarcoma and she was on Provera (medroxyprogesterone) for 8 years which was discontinued subsequently. We also considered and ruled out other differential diagnoses such as benign metastasising leiomyoma, pulmonary lymphangioleiomyomatosis (PLAM) and meningotheliomatosis. Her previous lung biopsy was also reviewed showing similar changes to the current biopsy. Endometrial stromal sarcoma (ESS) is a very rare malignant tumour and our case showed a challenging diagnosis of metastasising LGESS to lung, missing of which can have a detrimental effect on patient's management.

44. DUAL EXPRESSION OF P40 AND TTF-1 IN NON-SMALL CELL CARCINOMA OF THE LUNG – A CASE SERIES

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Background: The 2015 WHO Classification of Lung Tumours advocates for minimal use of the diagnosis 'non-small cell carcinoma, not otherwise specified' (NSCC, NOS) on small biopsy or cytology samples. They cite that the use of immunohistochemical markers such as TTF-1 and p40 can provide a more specific diagnosis in up to 90% of cases. A diagnosis favouring adenocarcinoma triggers further testing for mutations which may provide the patient access to specific targeted therapies. In the presence of dual expression of p40 and TTF-1 within the same tumour cells, the WHO recommend classification as NSCC, favour adenocarcinoma.

Aims: Our study describes three cases of NSCC of the lung for which there was dual expression of p40 and TTF-1 in the same tumour cells with features of squamous cell carcinoma (SCC).

Methods: The H&E slides, immunohistochemistry and ancillary tests for each case were reviewed by multiple pathologists and a consensus diagnosis made.

Results and conclusions: The three cases were small biopsies of lung, two of which went on to have complete tumour resection. They had varying degrees of morphological and cytological features of SCC. All showed strong expression of both p40 and TTF-1 in the same tumour cells. Molecular testing found all three tumours to be negative for EGFR mutation. Only one of the tumours was given a final diagnosis of SCC after the resection

showed unequivocal squamous differentiation. The other two tumours were classified as 'poorly differentiated primary lung carcinoma', highlighting the diagnostic dilemma this phenomenon poses.

It is important that pathologists are aware of the possibility of positive TTF-1 staining in SCC of the lung. While there are no current targeted therapies for the common mutations found in these tumours, erroneous diagnosis by sub-typing may preclude patients from targeted treatments in the future.

Reference

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45. A RETROSPECTIVE ASSESSMENT OF PD-L1 EXPRESSION RATES IN NSCLC

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Background: Programmed death-ligand 1 (PD-L1) expression on tumour cells is a predictor of response to immune checkpoint inhibitors used to treat advanced non-small cell lung cancer (NSCLC). High PD-L1 expression is required for patients to receive first-line pembrolizumab monotherapy. Assessing expected PD-L1 expression rates in real-world specimens is an important factor in ensuring patients access the most effective treatments.

Aims: To review the local prevalence of PD-L1 expression in NSCLC and compare different specimen types.

Methods: We retrospectively reviewed NSCLC stained with PD-L1 IHC Ventana SP263 assay from January 2017-February 2019.

Results: PD-L1 expression was assessed in 144 cases of NSCLC during the 50 month period. Median patient age was 69 years and 65% were male. Histologically, 78% were adenocarcinoma, 14% squamous-cell carcinoma and 8% unspecified-NSCLC. Overall 33% of NSCLC showed high PD-L1 expression ($\geq 50\%$), 41% low (1–49%), and 26% no expression ($<1\%$).

Histology samples accounted for 78% of cases and 22% were cytology. Lung resections accounted for 19%. 57% were primary tumours and 43% metastases. A PD-L1 TPS of $\geq 50\%$ was seen in 26% of histology and 7% of cytology specimens. Amongst lung resections, high PD-L1 was observed in 25% of cases compared to 34% in other specimen types. In primary tumours, high PD-L1 was seen in 27% of cases compared to 40% in metastases.

Conclusions: Our overall prevalence of PD-L1 expression is in keeping with rates demonstrated in a large clinical trial investigating the efficacy of pembrolizumab first-line treatment in NSCLC. Due to the relatively small sample size in our study, further ongoing analysis of different specimen types is required.

46. CLASSIC HISTOLOGICAL FEATURES OF GAUCHER DISEASE: A CASE REPORT

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