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Abstracts

Results: Histologic study demonstrated intraparenchymal hemorrhage featuring small clusters of atypical cells in the alveolar spaces with increased mitotic activity. Immunohistochemical stains were strongly positivity for endothelial markers. The Ki-67 proliferation index was 30-40%. A diagnosis of epithelioid angiosarcoma was made, with a comment to exclude primary tumour of sun-exposed skin such as that of the head or neck regions. A clinical examination later revealed a nodular tumour at the left fronto-parietal scalp, which was FDG-avid on PET scan. The patient was managed as angiosarcoma of the scalp with metastatic disease to the lung. He was started on chemotherapy regime of paclitaxel but showed disease progression despite one year of treatment.
Conclusion: Angiosarcoma is a rare but highly aggressive vascular tumour that can present in the lung as metastasis. This case underscores the importance of considering rare metastatic malignancies in the differential diagnosis of cystic lung diseases in elderly patients, even in the absence of prior medical history or the absence of visible clinical lesions. Clinicians should be cognisant that metastatic angiosarcoma to the lung can present with recurrent pneumothorax. Comprehensive histopathological assessment is indispensable for accurate diagnosis in such intricate presentations.

E-PS-20-012
Mucous gland adenoma of the lung: a case report from a very rare entity in an unusual location
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Background & objectives: To present a rare case of a Mucous gland adenoma (MGA) located peripherally in the lung, along with a brief overview of its histopathological and clinical characteristics.
Methods: A 68-year-old male with clinical history of hypertension, type 2 diabetes, dyslipidemia and sleep apnea syndrome presented with a parenchimatous peripheral lung mass in the apical segment of the inferior lobe of the right lung, with less than 1 centimeter in size, with no contrast enhancing. Biopsy was performed for histopathological analysis.
Results: Histopathological examination revealed pulmonary parenchyma with focal proliferation of mucinous columnar cells with mild cytology features, without hyperchromasia, pleomorphism, or mitoses. The immunohistochemical profile showed positivity for CK7+ with no expression of TTF1, S100 and P63. Given the histological findings the diagnosis of a mucous gland adenoma was made, a very uncommon entity of the bronchial tree, althoungh there are few reported cases of intraparenchymal location. The patient is in a 3 month CT scan follow up scheme and there were no changes in the size or features of the mass in the first six months post biopsy.
Conclusion: Mucous gland adenomas are challenging to diagnose due to their rarity and can mimic other pulmonary neoplasms. A thorough differential diagnosis study should be done with other rare benign entities (alveolar cell adenoma and mucinous cystadenoma), but the main differential diagnosis should be with malignant lesions (adenocarcinoma and low-grade mucoepidermoid carcinoma) that need a completely different management and treatment. There are no more than 6 cases (according to our research) of a MGA in a periphereal intraparenchimal location.

E-PS-20-013
Immunophenotypic analyses of diffuse idiopathic pulmonary neuroendocrine cell hyperplasia: a brief case series tested with emerging markers INSM1 and POU2F3
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Background & objectives: Diffuse idiopathic pulmonary neuroendocrine cell hyperplasia (DIPNECH) is a rare entity characterized by an abnormal proliferation of pulmonary neuroendocrine cells. Its role as preinvasive lesion is not well defined. We performed immunohistochemical profiling with particular reference to new NE markers.
Methods: Eight lung resection specimens with multifocal NECH, including a case with associated silicotic nodules, were carefully reviewed. Carcinoids, tumourlets and NECH were histologically diagnosed using WHO criteria. The number of NECH/slide and tumourlet/case was recorded. The expression of chromogranin A, synaptophysin, CD56, Ki67, TTF1, INSM1 and POU2F3 was analysed and graded in all neuroendocrine cells.
Results: We recorded 3-6 NECH/slide and most of them (n=7) were associated with tumourlets. Common neuroendocrine markers (chromogranin A, synaptophysin and CD56) were highly expressed. The percentage of positive cells for INSM1 was >50% in three cases, 20-40% in four cases and focal staining (<5%) was present in only one case. Interestingly, INSM1 was overexpressed only in cases of DIPNECH associated with typical carcinoids. POU2F3 expression was negative in all cases. In the non-idiopathic form (associated with silicotic nodules), 13 NECH/slide and 6 tumourlets were found, with an expression of NE markers similar to that of DIPNECH cases.
Conclusion: POU2F3 was never expressed in our cases, thus supporting its expression in tumourlets and carcinoids is not noteworthy. INSM1 expression was particularly increased in DIPNECH associated with carcinoids. These data could help us to better understand the pathobiology of DIPNECH, allowing, if the data are confirmed in larger case series, to stratify reactive NECH from preinvasive lesions.

E-PS-20-014
Association of EGFR mutation status with morphological, epidemiological, clinical characteristics of lung adenocarcinoma and squamous cell carcinoma
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Background & objectives: EGFR mutation in non-small cell lung cancer is associated with female gender, smaller tumour size, TTF-1 expression etc. [Zhang, Katgı] The aim was to evaluate the association of EGFR mutation status with some morphological, epidemiological and clinical characteristics in Latvia.
Methods: A total of 139 cases were identified in Pauls Stradiņš Clinical University Hospital with diagnosed lung adenocarcinoma (AC) and squamous cell carcinoma (SCC), when EGFR mutation analysis was performed in 2022-2023. We evaluated the correlation of EGFR mutation status with patients gender, age, tumour histological type, grade, radiological size and immunohistochemical TTF-1, PD-L1 expression and ALK mutation status.
Results: Mean age of patients was 68.9±SD8.1 years, 101 males and 38 females. Positive EGFR mutation was found in 17 patients (12%), negative in 122 patients (88%). EGFR positivity correlated significantly with female gender ($p<0.0001$). EGFR positive mutation was found in AC only (n=17), 60 AC were EGFR negative, all SCC (n=62) were EGFR negative. Positive EGFR mutation status correlated significantly with AC vs SCC ($p=0.0001$) and TTF-1 positivity ($p=0.0001$). Negative correlation was found between EGFR and PD-L1 ($p=0.04$). No statistically significant correlation was found between EGFR mutation status and patients age, tumour size, histological grade, ALK mutation ($p>0.05$).
Conclusion: In our population, the female gender, adenocarcinoma type tumour (vs squamous cell carcinoma) and immunohistochemical TTF-1 positivity were associated with the presence of EGFR mutation. These characteristics can predict the status of EGFR mutation in lung non-small cell carcinoma.