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P-AP13. Rhabdomyosarcoma presenting as an aggressive neck swelling with neurological complications in an infant: A case report

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Introduction: Rhabdomyosarcoma (RMS) is the most common soft tissue malignancy in children and adolescents. The rarity of its occurrence in infant posed a great difficulty in terms of diagnosis and management. Here, we report an aggressive case of alveolar rhabdomyosarcoma in an infant which presented as neck swelling with neurological complications. The MRI revealed a soft tissue swelling of the neck with intraspinal extension and spinal cord compression, raising the possibility of a neurogenic or malignant nerve sheath tumour. Histopathological examination revealed a primitive, small round cell tumour with no rhabdoid differentiation. The clinical presentation, neurological symptoms, tumor location and the histopathologic features were highly suggestive of neuroblastoma. However, the tumour cells were positive for desmin, and exhibited weak nuclear immunoreactivity with antibodies to myoD1 and myogenin, features in favour of rhabdomyosarcoma. Fluorescent in situ hybridization (FISH) confirmed the presence of a translocation t(2;13)(q35;q14), supporting the diagnosis of alveolar rhabdomyosarcoma. Despite chemotherapy, patient succumbed to death after 2 months due to disseminated disease. **Discussion:** Rhabdomyosarcoma is highly aggressive mesenchymal neoplasm which may present with diagnostic difficulty. This case highlights the importance of molecular studies in making an accurate diagnosis so that appropriate chemotherapy may be instituted.

P-AP14. Atherosclerosis in Chronic Organic Arsenic (Monosodium Methylarsonate) Exposure

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Introduction: Human worldwide is exposed to arsenic mainly through drinking of arsenic-contaminated ground water. Arsenic is one of the environmental toxins reported to be associated with atherosclerosis with more attention given to inorganic arsenic as it was thought to be more toxic. Since organic arsenic particularly monosodium methylarsonate are still popularly being used and produced for agricultural activities, this study aimed to investigate the effects of chronic organic-arsenic exposure on the development of atherosclerosis in a rat model based on real human exposure. **Materials & Methods:** Fifty five male Sprague-Dawley rats were divided into 5 groups including a control group. Four treatment groups received oral intubation of monosodium-methylarsonate (MSMA) at 42.13, 63.30, 126.4 and 210.67 mg/kg body weight respectively every day for 16 weeks. Aorta were harvested and stained for H&E and Verhoef Van Gieson as well as for immunohistochemistry VCAM-1 and ICAM-1. **Results:** Rats treated with 126.4 and 210.67 mg/Kg BW of MSMA was noted to have high mortality due to severe diarrhea and drastic weight reduction and therefore was discontinued from our study. Rats treated with 42.13 and 63.3 mg/Kg BW MSMA showed positive early atherosclerosis changes microscopically with positive VCAM-1 and ICAM-1 expression. **Discussion:** This study highlighted that chronic organic arsenic exposure with MSMA also leads to the development of atherosclerosis. This indicates that chronic organic arsenic exposure is as equally toxic as inorganic arsenic exposure in the development of atherosclerosis.

P-AP15. Detection of EML4-ALK in lung adenocarcinoma with immunohistochemistry and Fluorescent-in-situ hybridization technique

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Introduction: The echinoderm microtubule-associated protein-like 4 anaplastic lymphoma kinase (EML4-ALK) is now considered as an important driver oncogene in lung cancer. ALK +ve lung adenocarcinomas exhibit a significant therapeutic response to crizotinib, a TKI inhibitor. This study is aimed to determine the frequency of ALK mutations in adenocarcinoma of lung using both immunohistochemistry (IHC, anti-ALK D5F3 rabbit monoclonal antibody, Ventana, USA) as well as fluorescent-in-situ hybridization (FISH, Vysis LSI ALK Break Apart Rearrangement Probe). Clinical features such as age, ethnicity, gender and smoking history were analysed. **Materials and Methods:** In this retrospective study, a total of 50 biopsies confirmed, primary lung adenocarcinomas at the University of Malaya Medical Centre were analysed. All cases were negative for Epidermal Growth Factor Receptor (EGFR) mutation. Those cases which were ALK protein positive by IHC were further assessed by FISH. **Results:** Six cases were positive for ALK protein (12%) by IHC, of which four cases were also FISH positive. In one case, tissue was insufficient for analysis by FISH. Statistical analysis showed that