Primary Pleural Synovial Sarcoma: A rare cause of antenatal chest pain

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Pleural Synovial Sarcoma (PSS) is a rare type of mesenchymal tumour first described in 1996 [1]. We describe a case of primary PSS presenting during pregnancy and diagnosed following VATS pleural biopsy.

Description

A 30 year old Para 3 presenting at 29 weeks gestation with dyspnoea and right sided pleuritic chest pain was treated with antibiotics for presumed community acquired pneumonia (fig. 1)

Two further presentations to hospital with severe upper back pain, progressive hypoxia and hypertension alongside evidence of foetal compromise with growth on the 5th centile culminated in admission to critical care for high flow nasal oxygen and intravenous hypertensives.

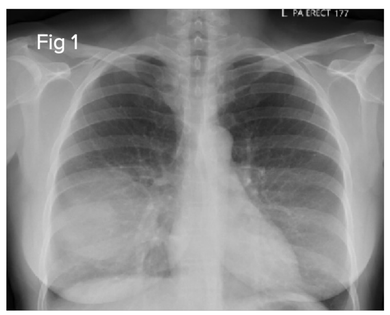
Fig 1

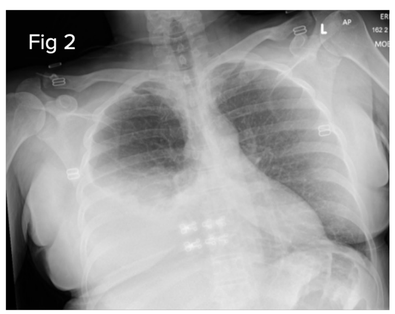
Fig 2

Worsening clinical condition (fig. 2) alongside a non reassuring CTG led to an expedited delivery via caesarean section under general anaesthesia at 30 weeks gestation.

Extubated on day one post natally and proceeded to CT chest imaging which revealed an enhancing pleural lesion arising from the pleura with an associated large haemothorax (fig. 3 & 4)

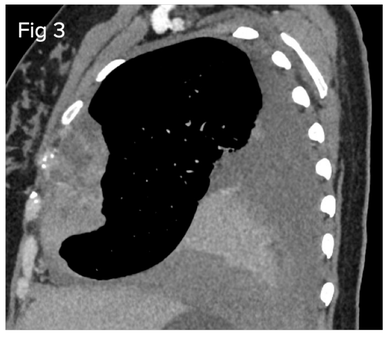
Fig 3

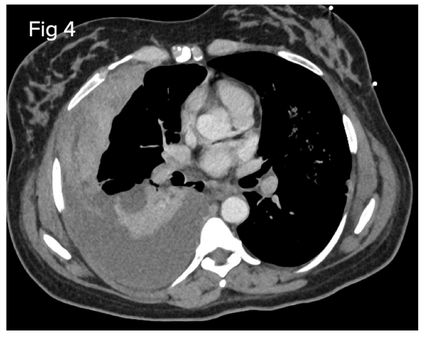
Fig 4

A tissue diagnosis obtained via VATS pleural biopsy confirmed the diagnosis of PSS (fig. 5). Unfortunately unsuitable for surgical resection due to tumour extent and she progressed to palliative radiotherapy with ongoing stable disease appearances (fig.6).

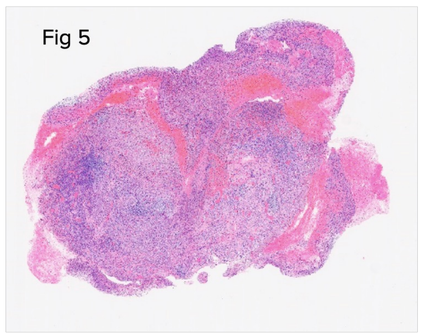
Fig 5

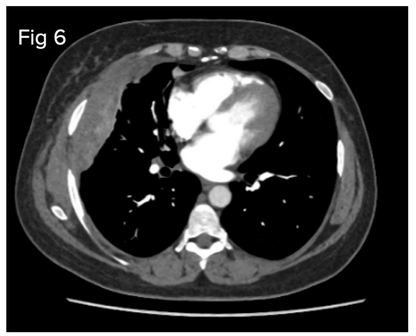
Fig 6

Discussion

Cancer diagnosis during pregnancy is rare with an incidence of 1 in 1000, but prevalence is increasing due to advancing maternal age [2].

Synovial sarcomas usually present between age 15 and 40 and derive from pluripotent mesenchyme capable of synovial differentiation [1]. Usually occurring in the limbs near large joints, PSS represent a small subsection.

Common presenting symptoms are non specific; chest pain, cough, dyspnoea and haemoptysis.

Diagnosis is challenging due to similarity with other pleural malignancies but is supported by radiology, pathology and cytogenetics [1].

Synovial sarcomas in the extremities are sensitive to chemotherapy but optimum management for PSS has not been defined. Multimodal management with surgery, radiotherapy and chemotherapy have been used [1].

Pregnancy presents further challenges; reluctance to administer unnecessary ionising radiation and concerns about foetal wellbeing impacting management when diagnosed antenatally.

PSS are aggressive tumours with a high chance of recurrence despite aggressive therapy and a 5 year survival of 57% [1].

This case highlights the value of a multidisciplinary approach in a parturient presenting with persistent respiratory symptoms and abnormal radiology.

References

1. Colwell AS, D'Cunha J, Vargas SO, Parker B, Dal Cin P, Maddaus MA. Synovial sarcoma of the pleura: A clinical and pathological study of three cases. J Thorac Cardiovasc Surg. 2002 Oct;124(4);828-832.
2. Zarkavelis G, Petrakis D, Fotopoulos G, Mitrou S, Pavlidis N. Bone and soft tissue sarcomas during pregnancy: A narrative review of the literature. J Adv Res. 2016 Jul;7(4):581-7.

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