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A rare cause of solid hypervascular intrathoracic mass lesions on CT

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Case Presentation

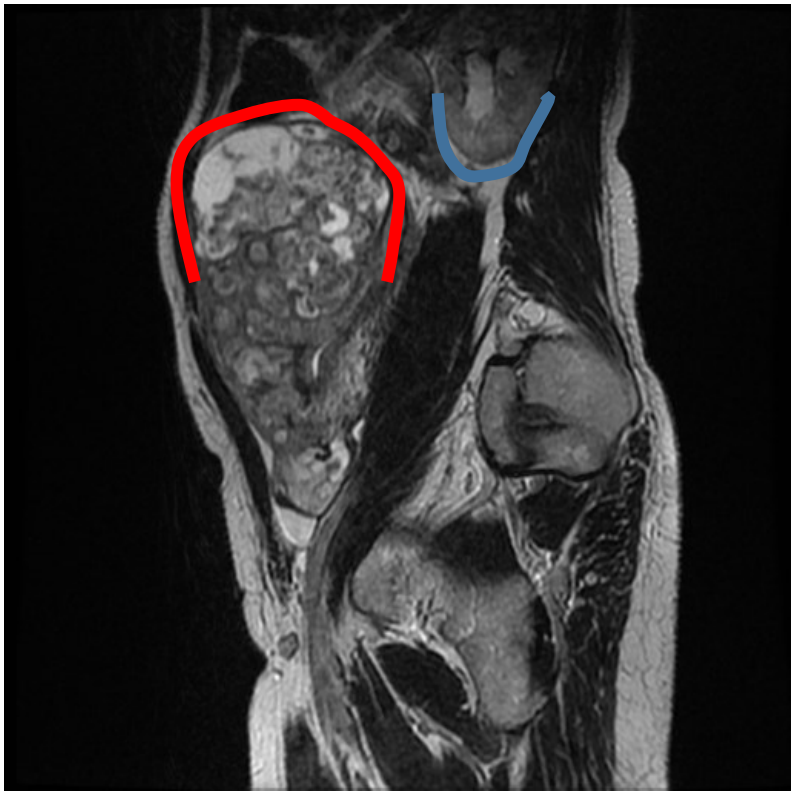
42 year old woman

Presenting complaint:

- weight loss

Past medical history

- History of menorrhagia 4 years ago. Found to be due to large fibroid uterus
- Treated with GnRH analogues and myomectomy initially
- Abdominal hysterectomy a year later
- Otherwise fit and well



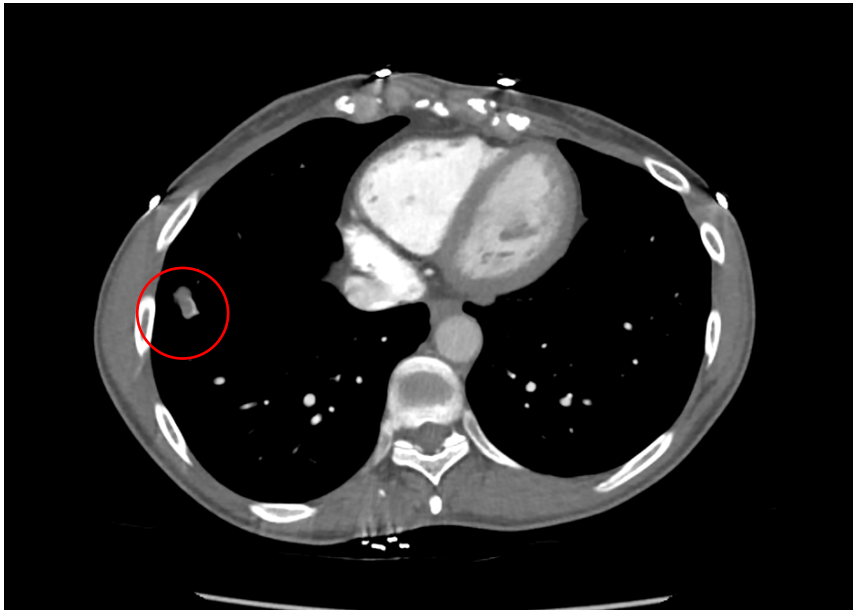
T2 weighted sagittal image showing a large heterogeneous uterus with cystic components (red) extending >25cm caudally to the level of the right kidney (inferior pole marked in blue)

Findings on CT

Axial CT at the level of the main pulmonary arteries (above) and sagittal CT of the thorax to the left of midline (right): Large well defined mediastinal mass containing serpiginous high density vessels supplying the vascular tumour.

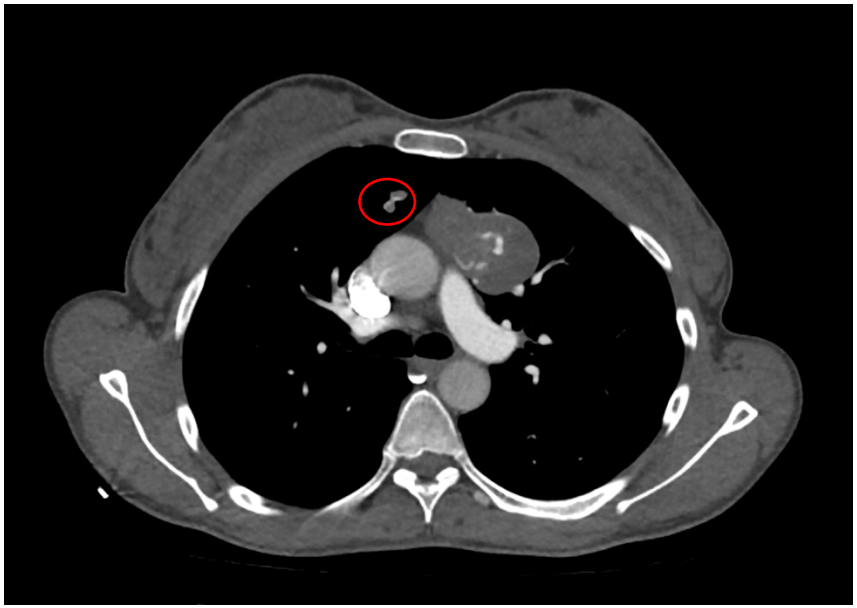
Well defined mass with fat plane preserved between it and the mediastinum

Further findings on CT



Axial CT (above): Further well defined right lower lobe mass lesion, also with a prominent vessel along its medial border

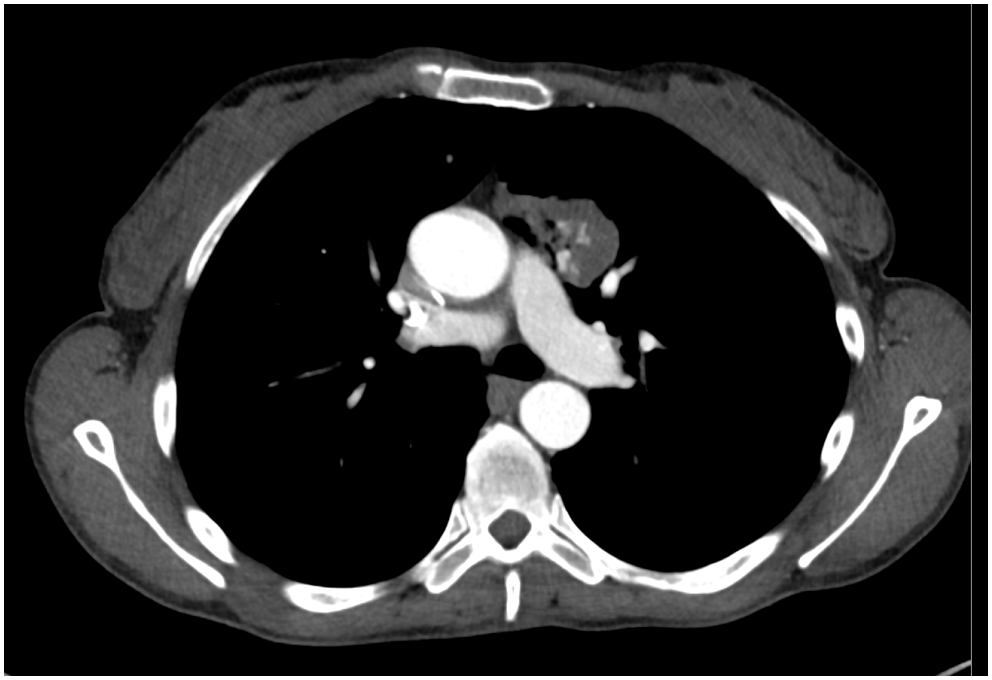
Axial CT (below): Another small mass in the right upper lobe close to the main mediastinal mass. No mediastinal or hilar lymphadenopathy



First impressions and further investigations

- Thoracic masses were initially thought to be metastases, potentially of gynaecological or sarcomatous origin
- A wedge resection was performed on the right lower lobe mass which was sent for histology
- The result demonstrated this was, unusually, benign metastasising leiomyoma.

Treatment



As the tumours are oestrogen sensitive, treatment was bilateral oophrectomy.
Post treatment axial (above) and sagittal (right) CT images demonstrate tumour shrinkage.

Benign Metastasising Leiomyoma

- Rare disease
- Most often affecting women aged 35-55 years, from 3 months to 20 years after hysterectomy for fibroid uterus [1]
- Most common extrauterine location is the lungs [1,5]
- Often asymptomatic and found incidentally, although cough and shortness of breath can be present [1]
- Poor correlation between extent of disease in the lung and respiratory symptoms [3]
- Although morbidity and mortality has been reported, usually this condition has an indolent course and mortality is due to an unrelated disease [2]

Diagnostic considerations

- MRI can be a useful modality for assessing these lesions regardless of anatomical location as they will demonstrate typical signal appearances the same as smooth muscle in all sequences[4]

- Histology usually required for definitive diagnosis[5].

Treatment

- As the tumours exhibit hormone receptors, reducing exposure to oestrogen by receptor blockade or oophrectomy can halt growth.

- Tumours can regress though many remain stable with this treatment [1].

- Surgical resection is another option.

Key Learning Points

- Extrauterine leiomyoma should be considered as an alternative to metastases for bilateral pulmonary nodules and masses particularly in asymptomatic women of childbearing age with a history of hysterectomy or fibroid uterus.

- Poor correlation between extent of thoracic disease and respiratory symptoms.

- MRI may be helpful if the diagnosis is considered if the patient does not wish to undergo definitive surgical histopathological diagnosis.

References

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