

A SHEEP IN WOLF'S CLOTHING

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BACKGROUND

- A 31 year old male, presented with a 3 month history of chronic cough
- He was otherwise well but complained of occasional anxiety symptoms
- Past medical history included bilateral inguinal hernia repair and a small sliding hiatus hernia
- There was no significant family history
- Non-smoker, no alcohol
- BMI 36, he worked as an aircraft dispatcher. Normal BP.
- Chest X-ray was normal
- CT showed 2 incidental para-aortic lesions measuring approximately 4 cm

FURTHER INVESTIGATIONS

- Normal serum biochemistry
- Normal urinary and plasma metanephrines
- Prolactin and calcium both within normal parameters
- Chromogranin A was 1.2 nmol/L
- The patient underwent an MRI of the abdomen followed by MIBG SPECT-CT and DOTATATE PET/CT

IMAGING

- On MRI the lesions demonstrated heterogeneously high signal on T2 weighted sequences, intermediate signal on T1 weighted sequences, no restricted diffusion and evidence of some fat content
- Subsequent DOTATATE-PET-CT demonstrated tracer uptake by the lesions: the possibility of a cystic paraganglioma was raised.
- Whole body MRI did not demonstrate any other lesions elsewhere.
- The lesions did not demonstrate avidity on MIBG-SPECT-CT.
- Genetic testing also came back as negative for SDH mutations

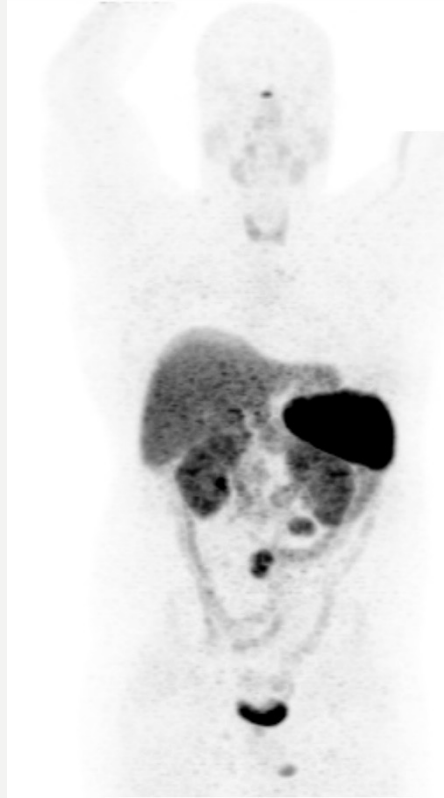
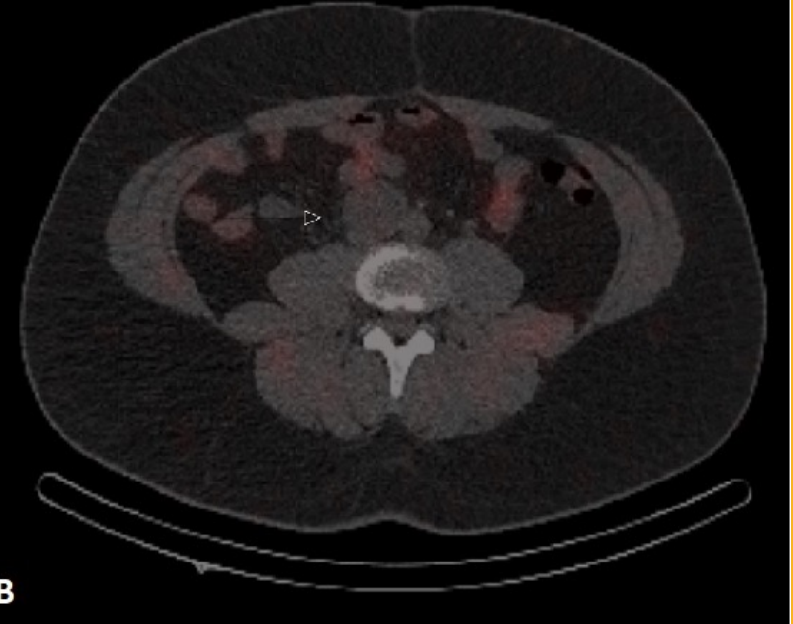
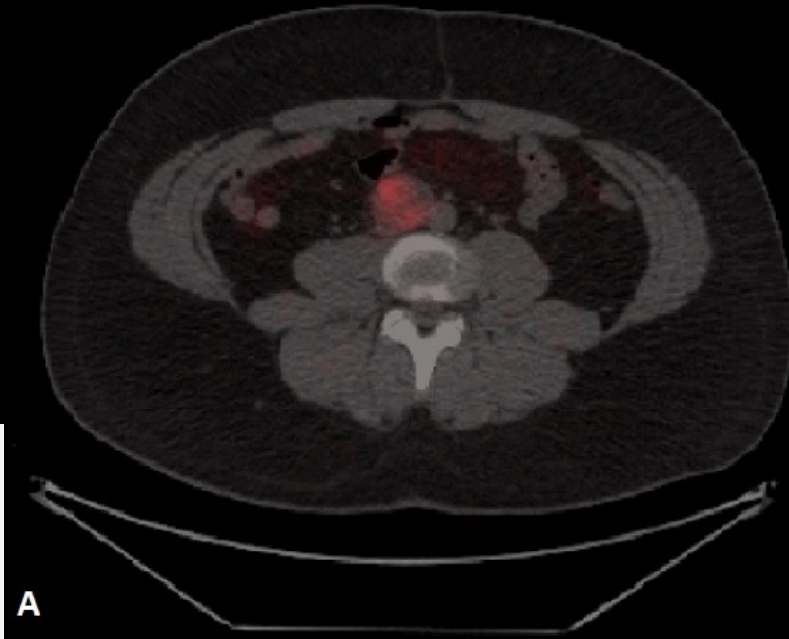
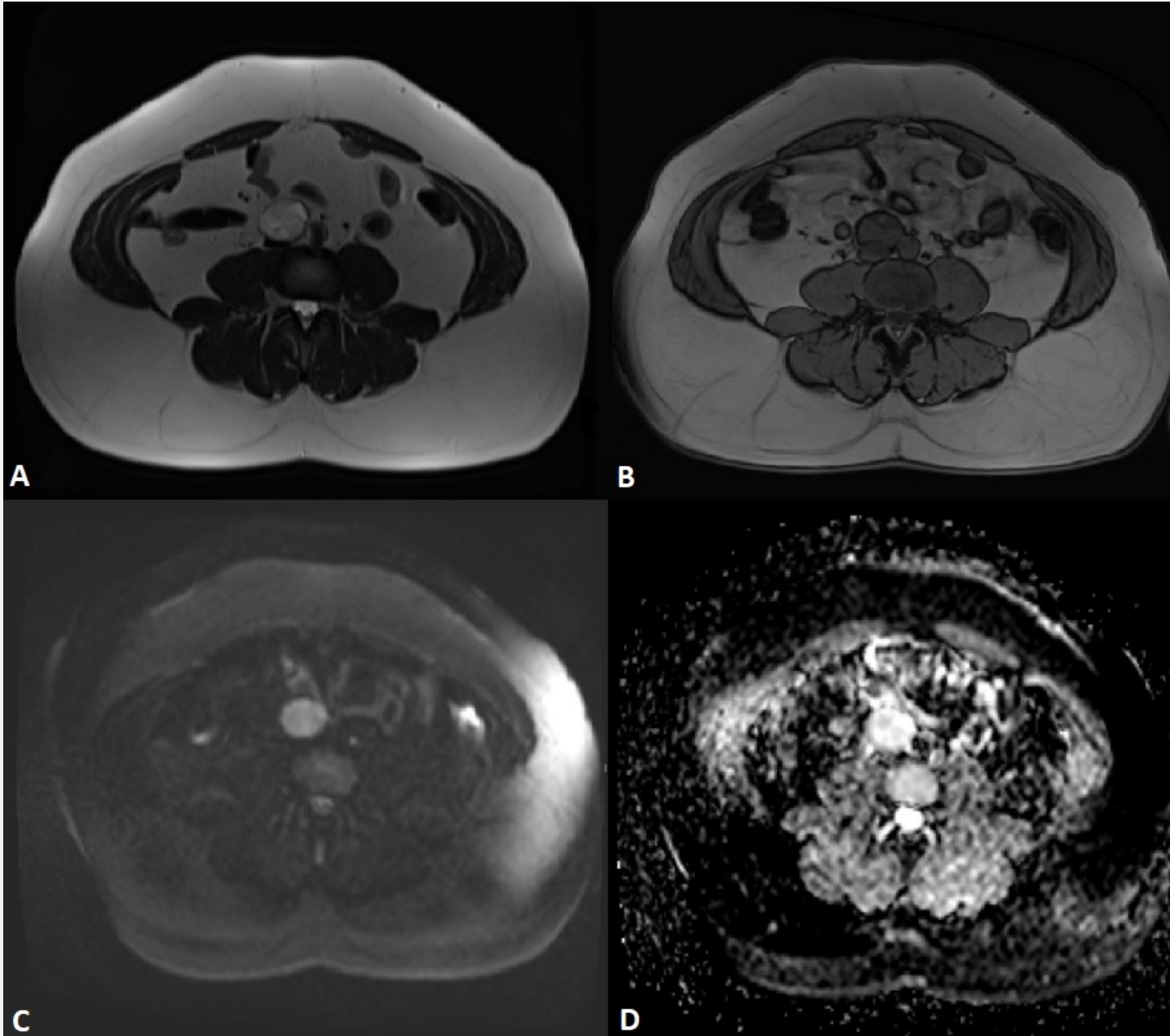


Figure 1 (top left): Appearances of the lesions on unenhanced CT

Figure 2 (top right): Appearances of the lesions on DOTATATE-PET/CT (A) and MIBG-SPECT/CT (B): the lesions demonstrated DOTATATE uptake but no MIBG uptake]

Figure 3 (bottom left): whole body MIP image from the DOTATATE-PET/CT demonstrating multiple lesions



MRI APPEARANCES

- A) Heterogenously high signal on T2W images
- B) Intermediate signal on T1W images
- C) T2 shine through on DWI
- D) No true restricted diffusion demonstrated on the ADC map

MANAGEMENT

- Whole body MRI did not demonstrate other lesions elsewhere
- Genetic testing was negative for SDH mutations
- The lesions were deemed not amenable to percutaneous or EUS biopsy
- The possibility of an atypical cystic paraganglioma was raised, and given the diagnostic uncertainty surgical resection was recommended and performed
- The histology from the lesions was consistent with a benign capillary haemangioma.
- The patient remained well after the surgery and has been discharged from follow-up.

FINAL DIAGNOSIS

- Histology of the lesions was in keeping with benign capillary haemangiomas
- The patient was discharged and remains well

CONCLUSIONS

- DOTATATE uptake by haemangiomas has been reported in literature. The mechanism of this is however unknown
- Tissue diagnosis and/or surgical excision of DOTATATE avid retroperitoneal masses is always advised

Vertenten B, Goethals L, De Geeter F. ^{68}Ga DOTATATE Uptake in Hemangioma Simulating Metastasis on PET Imaging: CT helps characterize bone hemangioma that could be wrongly interpreted as skeletal metastases on ^{68}Ga DOTATATE PET imaging. J Belg Soc Radiol. 2019 Jun 28;103(1):38. doi: 10.5334/jbsr.1772. PMID: 31276092; PMCID: PMC6598605.