Clinical hyperthyroidism with a gynae cause: A case of Struma Ovari with follicular carcinoma

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Introduction:
A 48 year old lady was referred to the general surgeons for a total thyroidectomy for relapsing Graves’ disease in November 2017. Despite this, she was still hyperthyroid post-operatively and required carbimazole. She was under cardiology for ongoing paroxysmal atrial fibrillation requiring Apixiban.

Case:
A provisional diagnosis of ectopic thyroid tissue was considered but both a targeted thyroid uptake scan and SPECT scan did not show any significant thyroid tissue.
A possible diagnosis of struma ovarii was raised and a transvaginal USS was performed.

Results:
Normal appearance of a retroverted uterus with thin endometrium (4.3mm in AP diameter).

There is a large complex mixed cystic and solid mass in the midline posterior to the uterus. This contains micro-calculations and irregular cystic borders. The mass measures 92mm in diameter. There is a small amount of free fluid surrounding the mass. Neither ovary could be identified but the mass is almost certainly ovarian in origin.
Urgent follow-up advised to confirm / exclude neoplastic process.

The Ca 125 was slightly elevated at 76.9.
She underwent a total body I-131 scan which showed uptake in the pelvis.

Management:
The case was discussed at the regional MDT and the decision made for local management.
She underwent a left salpingo-oopherectomy and right salpingectomy. An omental biopsy and peritoneal washings were also taken.

Post-operative care:
The decision by the MDT was that this is not to be treated as invasive follicular carcinoma. She is being monitored with thyroglobulin levels every six months.

Unfortunately, she is still suffering with atrial fibrillation and due to be seen by cardiology for consideration of ablation.

Histology:
Left ovary – follicular carcinoma arising within struma ovarii
Omentum and fallopian tubes grossly normal.

Struma Ovari:
Struma ovarii is a type of monodermal teratoma. By definition, the tumour should contain >50% thyroid tissue and they account for approximately 5% of teratomas.
Clinical and biochemical features of hyperthyroidism are uncommon, present in only approximately 5% of cases.
Recurrence rates range from 7.5–35% but metastatic disease is less common at 5–23%.
Long term survival rates are generally high but the relative rarity of this disease makes for challenging decision making with regards to follow up.

References: