Struma ovarii: a case report and rare presentation

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Introduction

Struma ovarii is a rare ovarian lesion which characterized by the presence of thyroid tissue in at least half of the overall ovarian mass [1,3]. This tumour is considered a teratoma, but sometimes may be encountered with mucinous or serous cystadenomas [1]. Malignant struma ovarii is very rare. Struma ovarii is mostly common between the ages of 40 and 60 years and accounts for approximately 3% of ovarian terato mass and 0.3% of all ovarian tumours [2]. The immense majority are benign, and ~5% are malignant. It often presents with nonspecific symptoms and can mimic ovarian malignancy. The diagnosis is usually a surprise made after surgery, based on histo-pathological findings [3].

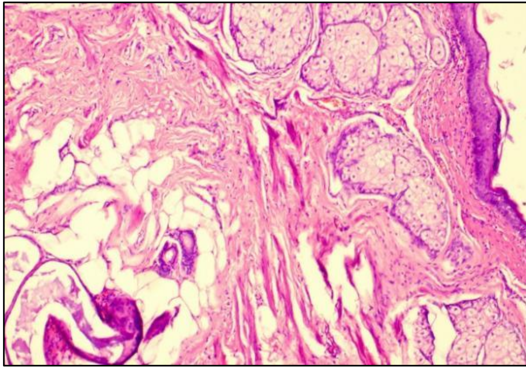
Among malignant ovarian tumours, there is a group of germ cell tumours, which are associated with great heterogeneity and low prevalence. Ovarian teratomas are the most common of this group and are subdivided into mature, immature, and monodermal teratomas. Struma ovarii (SO) is classified as a monodermal ovarian teratoma, and 50% of its composition is thyroid tissue. It represents 2.7% of ovarian teratomas and 0.5% of malignant ovarian tumours [4].

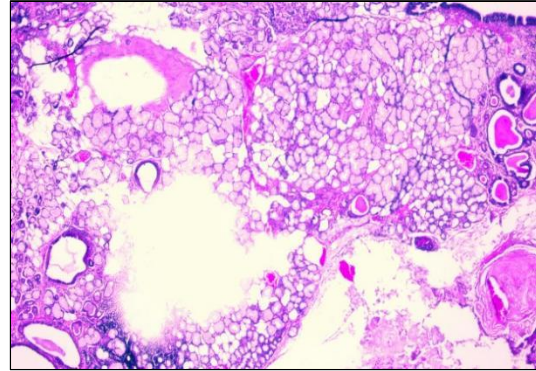
Case Report

A 35-year-old woman, was admitted for further investigation and treatment of a palpable mass at the anatomical position of the left adnexa, known for the preceding 3 years. Her past medical and family history were unremarkable, with the exception of a 2 caesarean sections. At the time of admission, physical and pelvic examination were normal, apart from a humped mass extending from the left adnexa. Trans-vaginal ultrasound revealed a left ovarian tumor 3 x 2 cm. Prior to surgery the patient didn't show any symptoms of hyperthyroidism. Laboratory results were unremarkable. The patient underwent a left oophorectomy .

Multiple sections submitted from tumour mass show features of Benign Cystic Teratoma with presence of epidermal, mesodermal and endodermal derivatives. Colloid filled thyroid follicles are also seen. No evidence of malignancy is seen.

A final impression of Benign Cystic Teratoma (Dermoid Cystic) with features of Struma Ovarii, was given.





Optical micrograph stained with haematoxylin and eosin, magnification 10X

Mature thyroid tissue is seen with follicles of various sizes, surrounded by hyperplastic cuboidal follicular cells.

Discussion

Different variants of struma ovarii have been described. In benign strumosis as a rare version of this tumour, mature thyroid tissue may be appeared throughout the peritoneal cavity, but in malignant version named carcinoid, the presence of malignant tissue can be revealed within a struma ovarii [1]. Preoperatively, the clinical diagnosis of struma ovarii is possible in patients having hyperthyroidism, but only 8 % of patients with struma ovarii present with clinical hyperthyroidism. Laparoscopic approach involves either oophorectomy, which is recommended, or enucleation of the tumour, which is a fertility-preserving procedure that could be performed in selected cases [2].

The preoperative clinical diagnosis of struma ovarii is a challenge for the surgeon. Sometimes the diagnosis can be facilitated by the presence of symptoms of hyperthyroidism, although this is only found in less than 10% of patients.10 In most cases, the diagnosis is obtained by histopathological study [4].

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