

A Rare Case of Ectopic Thyroid Tissue in Ovary

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Abstract: Presence of thyroid tissue in ovary is a rare condition. It is present in the form of an ovarian tumor known as Struma ovarii. Definite diagnosis can be made on the basis of histopathology and immunohistochemical staining.**Keywords:** thyroid tissue, Struma ovarii, ovarian tumor

INTRODUCTION

Struma ovarii is a specialized or monodermal teratoma predominantly composed of mature thyroid tissue, which must comprise more than 50 percent of the overall tissue to be classified as a Struma ovarii [1]. It accounts for approximately 5 percent of all ovarian teratomas [2] and could be benign or malignant [5]. We report a case of benign Struma ovarii who presented with complex ovarian cyst and abnormal uterine bleeding,

CASE REPORT:

A 42 year old para 3 woman presented with chief complaints of irregular excessive bleeding and recurrent pain abdomen for past 2 years. She had heavy menstrual bleeding with menstrual cycle of 20 days, bleeding lasting for 6-7 days. The patient also complained of recurrent, dull aching, lower abdominal pain. There was pallor, vital parameters, per abdominal was normal. On local examination, per speculum examination was normal. Bimanual examination revealed that the uterus was 8 weeks size, freely mobile. A mass was felt through the right fornix which was tender to touch, of about 8 X 8 cms size, impacted in the pouch of Douglas. Ultrasonography showed a cystic mass of 62x44 mm, 85cc volume in the right adnexa with increased vascularity on Doppler. All routine hematological and biochemical investigations were normal. Endometrial biopsy showed secretory endometrium. Serum LDH was increased (1360 U/L) Beta HCG, alpha fetoprotein and CA-125 levels were normal. MRI showed uterus to be mild bulky, endometrial thickness 12mm, normal left ovary and a

bulky right ovary 72x58mm, showing multiple cysts filled with fluid.

Staging laparotomy was done. Peritoneal fluid and omental biopsy were taken. The uterus was bulky, 8 cms. Right ovary had a cystic multiloculated mass of 8x8 cm. There were multiple cysts, the largest one being 3x3 cm. Left ovary had a small cyst of about 2x1 cm, which seemed to be a hemorrhagic cyst. Hydatid of Morgagni was identified bilaterally. No other area of suspicion could be identified intra abdominally on inspection and palpation. A Total abdominal hysterectomy with bilateral salpingo oophorectomy was decided and done. Cut section of the specimen showed adenomyotic uterus with endometrial hyperplasia and endomyometrial thickness of 2.5 cm. Right ovary cut section showed solid cystic multilocular cyst, filled with dark brownish colored fluid and gelatinous material, no nodule, papilla or any other structure could be identified. Cut section of left ovary showed multiple cysts of 0.2-1 cm varying in diameter with serous to haemorrhagic fluid the specimen was sent for HPR. Post-operative period was uneventful.

Histopathology report showed an unremarkable myometrium with Monodermal Teratoma Struma ovarii in the right ovary and cystic follicles in the left ovary. On further nuclear staining, no increased nucleocytoplasmic ratio was seen, and no other sign of malignancy was present. The omental biopsy and the peritoneal fluid were devoid of any malignant pathology.

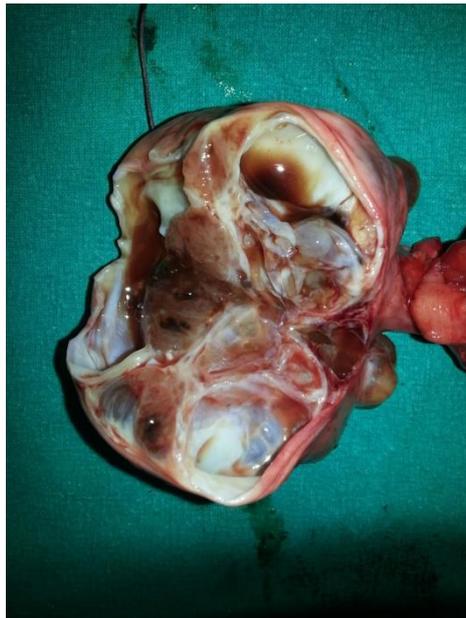


Fig 1 : Gross picture of right ovary Right ovary cut section showed solid cystic multilocular cyst, filled with dark brownish colored fluid

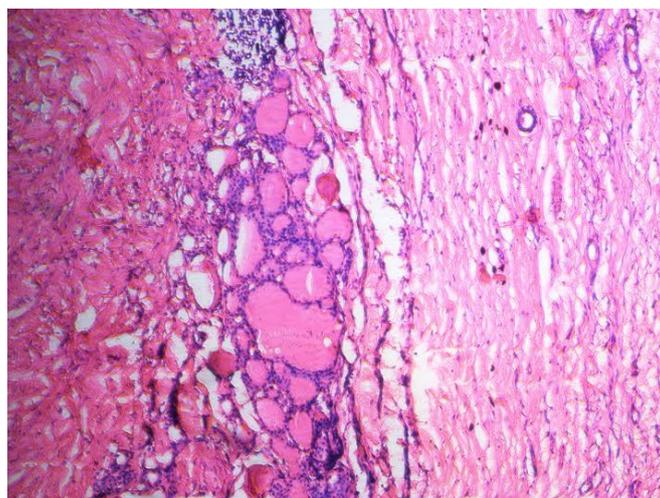


Fig 2: Microscopic picture showing thyroid tissue amidst ovarian stroma. (Hand E stain X10 low power)

DISCUSSION

Struma ovarii belongs to the group of monodermic and highly specialized teratomas where thyroid tissue is predominant [more than 50 percent] and accounts for less than 5% of mature teratomas [4]. Most cases are benign and usually unilateral. Symptoms of Struma ovarii are similar to those of other ovarian tumors and are nonspecific in nature - abdominal pain, mass, abnormal uterine bleeding, ascites [7], rarely Pseudo-Meigs syndrome. Rarely it could be hormonally active and manifest clinical symptoms of thyroid hyperactivity or thyrotoxicosis, due to autoimmune stimulation of the normal thyroid gland (5-8% of patients) [2]. It may be diagnosed as an incidental finding on pelvic imaging or surgery. Preoperative diagnosis is very difficult because ultrasonography (US), computed tomography (CT) and nuclear magnet resonance (NMR) are not specific enough as only

adnexal mass consisting of solid and cystic parts can be reported. Preoperative scintigraphy with iodine (^{131}I) could show active thyroid tissue in small pelvis. Cancer antigen 125 is rarely elevated.

Surgical resection of the ovary is sufficient to treat benign, unilateral disease. On gross examination, the struma is brown or green-brown and solid, but it can also be partly or entirely cystic, filled with gelatinous fluid. Diagnosis is based on the histology of the tumor. Thyroid tissue, the major component of the mass may be papillary, follicular, or mixed pattern can include elements of mucinous cystadenocarcinoma, Brenner tumor, carcinoid, or melanoma. Birefringent crystals of calcium monohydrate are present in most patients, which are considered specific for tumors of thyroid origin. Immunohistochemical staining for thyroglobulin, triiodothyronine (T₃), and thyroxine (T₄)

can confirm the diagnosis. Malignant changes in Struma ovarii are uncommon, pathological criteria used in diagnosing thyroid carcinoma are widely accepted as the standard in diagnosing malignant Struma ovarii [4].

In patients with malignant Struma ovarii, who do not desire future fertility, malignant Struma ovarii necessitates surgical staging for ovarian cancer with pelvic washings, total abdominal hysterectomy, bilateral salpingo-oophorectomy, lymph node sampling, total thyroidectomy, and radioactive I-131 ablation. Serum thyroglobulin levels can be followed as a marker for recurrence following fertility-sparing unilateral salpingo-oophorectomy. Several factors are associated with recurrence or extra ovarian spread. These include adhesions, peritoneal fluid of 1 liter or more, ovarian serosal rent, a papillary histology, or a struma component 12 cm or more. The overall survival rate for all patients is 89% at 10 years and 84% at 25 years.

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