PATHOLOGY QUIZ

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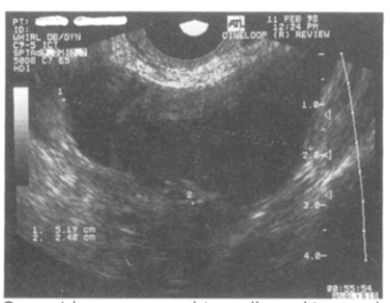
CASE PRESENTATION

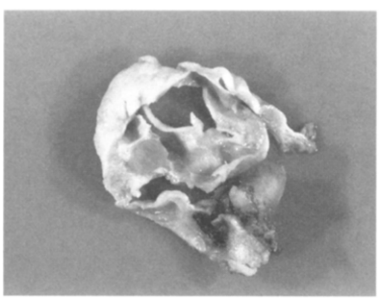
A 49-year-old G0 woman presented with a two-month history of moderate dull left lower abdominal pain. Pelvic examination revealed a cystic mobile left adnexal mass associated with slight tenderness. Transvaginal sonography (TVS) showed a simple five by three cm cyst in the left ovary and colour Doppler revealed normal flow (Figure 1). Serum tumour markers, including CA-125 and CEA, were normal. The patient initially elected to be followed conservatively by repeated TVS. Six months later, the cyst was unchanged but her pain was worse, and she underwent a total abdominal hysterectomy and left salpingo-oophrectomy.

FIGURE 1
TRANSVAGINAL SONOGRAPHY OF LEFT OVARY



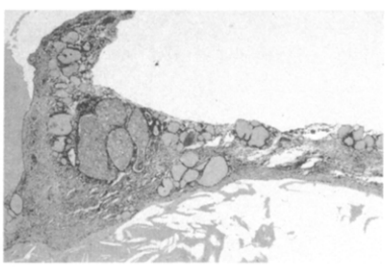
Cyst with transverse thin walls and internal echoes consistent with haemorrhage.

FIGURE 2
GROSS OF LEFT OVARY



Left ovary is replaced by 5x4x3 cm cyst filled with brown fluid.

FIGURE 3
HISTOLOGY OF THE OVARIAN CYST



Fibrous-walled cyst with aggregates of tightly packed follicular structures.

THE MOST LIKELY DIAGNOSIS IS (CHOOSE ONE):

1. Krukenberg tumour
2. Endometrioma
3. Thyroid adenoma
4. Struma ovarii
5. Dysgerminoma

THE DIAGNOSIS IS: *Struma Ovarii*

CASE REPORT

At the time of exploratory laparotomy, a moderate amount (≈ 500 cc) of yellow clear ascitic fluid was seen. The uterus was small, and the left ovarian cyst was dark yellow with a smooth external surface and thickened capsule. After removal, the cyst was opened and examined in the operating room. It contained thick yellow fluid and had a smooth inner surface with no papillary projections. The clinical impression was benign cystadenoma. The right ovary was absent as it had been removed several years before for adnexal torsion. Abdominal exploration was completed and was within normal limits. The postoperative course was uneventful and patient was started on estrogen replacement therapy. Her postoperative follow-up was normal, and she was satisfied with the outcome of the surgery.

PATHOLOGY

The left ovary was replaced by a 5x4x3 cm cyst filled with brown fluid. Within the wall of the cyst, there were small cysts filled with thick gelatinous material (Figure 2). Microscopic examination revealed a fibrous-walled cyst with aggregates of thyroid follicles filled with colloid (Figure 3). The cyst was lined by flat cuboidal epithelium with no aty-pia or mitotic activity, and lacking any cilia or intracellular, mucin.

ABOUT STRUMA OVARII

Struma ovarii is a rare variant of benign teratoma of the ovary in which, by definition, thyroid tissue constitutes either the entire, or nearly the entire, tissue component of the neoplasm. In most instances, the diagnosis is made by histology, as its gross appearance is not specific enough for thyroid tissues. Struma ovarii comprise 2.7 percent of ovarian teratomas; the age distribution of these is generally the same as that of patients with mature cystic teratoma (from 6–74 years.)[1,2] There are usually no specific symptoms, and the clinical findings are similar to those observed in patients with mature cystic teratoma. In about five percent of cases, symptoms and signs of thyrotoxicosis are observed, with thyroid enlargement (goitre). All of these are relieved following removal of the ovarian tumour.[3] The vast majority of cases of struma ovarii are benign, and will be completely treated by excision. In a small number of cases, there are complications, including ascites, with or without pleural effusion producing a pseudo-Meigs syndrome, and malignancy.[4] Although ascites may be found in 17 percent of cases of struma ovarii, it does not indicate that the tumour is malignant.[5] The incidence of malignant struma ovarii is less than one percent of all cases of struma ovarii; fewer than two dozen cases have been reported.[4] Occasionally, struma ovarii may be associated with extra-ovarian extension caused either by rupture of the tumour or by local spread. In such cases, the peritoneal cavity contains tumour deposits which may be numerous and composed of mature thyroid tissues. The condition is still benign and termed "benign strumatosis." It may be treated with tumour excision and/or administration of radioactive iodine.[6]

This case underscores the importance of careful histological examination of ovarian cysts and the fact that TVS is not diagnostic of struma ovarii.

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