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A CASE OF STRUMA OVARII IN A 48-YEAR-OLD FEMALE

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ABSTRACT
Struma ovarii is similar to ovarian cancer. Its diagnosis is difficult due to non-specific symptoms. It is a rare ovarian teratoma derived from germ cells along with thyroid tissue. The most common treatment is surgery. In this case, it was a 48-year-old lady with acute abdominal pain. Radio imaging (Magnetic resonance imaging and ultrasonography) showed a large cystic lesion the right pelvis. A total abdominal hysterectomy with bilateral adnexectomy was performed. On histopathology, the diagnosis of monodermal teratoma of struma ovarii was confirmed. This case has been discussed due to difficulties with preoperative identification and diagnostic accuracy.
Keywords: Struma Ovarii, Ovarian Neoplasms, Teratomas

Introduction

Although struma ovarii has been studied intensively studied since the beginning of the 20th century, many aspects remain to be clarified. It is described as an ovarian teratoma that has 50% or more of thyroid tissue component or is completely comprised of thyroid tissue or has grossly detectable component of mature cystic teratoma.[1,2] They are usually unilateral. The peak incidence is in the fifth decade of life.1 Struma ovarii accounts for 1% of ovarian tumors and approximately 2% to 5% of all teratomas in ovary. Most struma ovarii cases are benign, but a small percentage is malignant.[3]

Case History

A 48-year-old woman had a history of acute pain in right iliac fossa since 2-3 days, intermittent in nature and radiating to thigh and leg on right side. The history of irregular menses and dysmenorrhea was present since 3 months. There was no history of fever, weight loss, or known co-morbities. Her CA 125 levels were 21.3U/ml, beta-HCG was <1.2 mIU/ml, alpha feto protein was 3.99ng/ml and thyroid (all T3, T4 and TSH) levels were within normal biological reference range. USG showed a solid cystic lesion involving the right adnexa with the largest cyst measuring 6.5 x 4.1 cm. One of the cysts showed comet tail artifacts. MRI revealed a large heterogeneous midline multicystic mass lesion measuring 10.7 x 9.2 x 8.2

cm (CC x TR x AP) [Figure 1 A-B]. Bulky, edematous right ovarian pedicle and multiple small-intramural uterine fibroids were noted. The right ovary was not visualised separately and the lesion displaced the uterus posteriorly. The MRI was suggestive of mucinous/serous cystadenocarcinoma. The patient was taken up for total abdominal hysterectomy along with salpingo-oophorectomy of both sides and omentectomy. She was discharged with no postoperative complications and complete resolution of symptoms. On histopathological examination, the specimen grossly weighed 360 g and measured approximately 12 cm X 10 cm X 7.5 cm. The outer surface was bosselated, congested. [Figure 1C] Almost 100 cc straw-yellow serous fluid oozed out on cutting open. Multiple locules of various sizes ranging from 0.8 to 7cm in diameter were noted. [Figure 1D] One of the locules had sebum and hair tufts in it. Another locule measuring 6 x 4.5 cm showed greenish gelatinous material with few brownish areas. Microscopic examination revealed predominantly thyroid tissue with microfollicles and macrofollicles, clear cell and oxylophyllic areas. Areas filled with colloid were seen. Cyst wall showed stratified squamous epithelium lining with keratinization. [Figure 2 A-D] Uterus with cervix had multiple intramural fibroids, areas of adenomyosis, multiple nabothian cysts with chronic non-specific cervicitis. Based on these features, the diagnosis of monodermal teratoma of struma ovarii was confirmed. Careful postoperative follow-up and subsequent clinical, radiological and biochemical screening were recommended for the same.

Discussion

The clinical presentation of struma ovarii is very non-specific and identical to several other ovarian tumors. These include a palpable abdominal mass with pain, unusual vaginal bleeding, ascites, pseudo- meigs syndrome (rare), hyperthyroidism or simply an incidental finding on pelvic imaging or surgery.[2] Differential diagnoses include other ovarian tumors, ectopic pregnancy, hydrosalpinx, hyperthyroidism and thyrotoxicosis, metastatic thyroid carcinoma to the ovary, ovarian cyst or salpingo-ovarian abscess.[4,5] Tumor is characterized by imaging studies but a definitive diagnosis is established by histopathological examination. Uncommon gross appearance and histological patterns in struma can present similar diagnostic challenges.[4] Proliferative changes in cystic struma can be confused with carcinoma. Papillary-type thyroid carcinomas are the most common occurring thyroid-type carcinomas in cases of struma, which are usually confined to the ovary and generally, do not spread beyond it.[4] The prognosis is good. Surgical resection is the ultimate treatment for cases with unilateral benign disease. In metastatic and recurrent cases, surgery with adjuvant radioiodine therapy is useful.[5] Thus, struma ovarii despite being studied and understood thoroughly over the decades; its apprehension and inquisitiveness for research still remain indispensable aspect for clinicians and pathologists.

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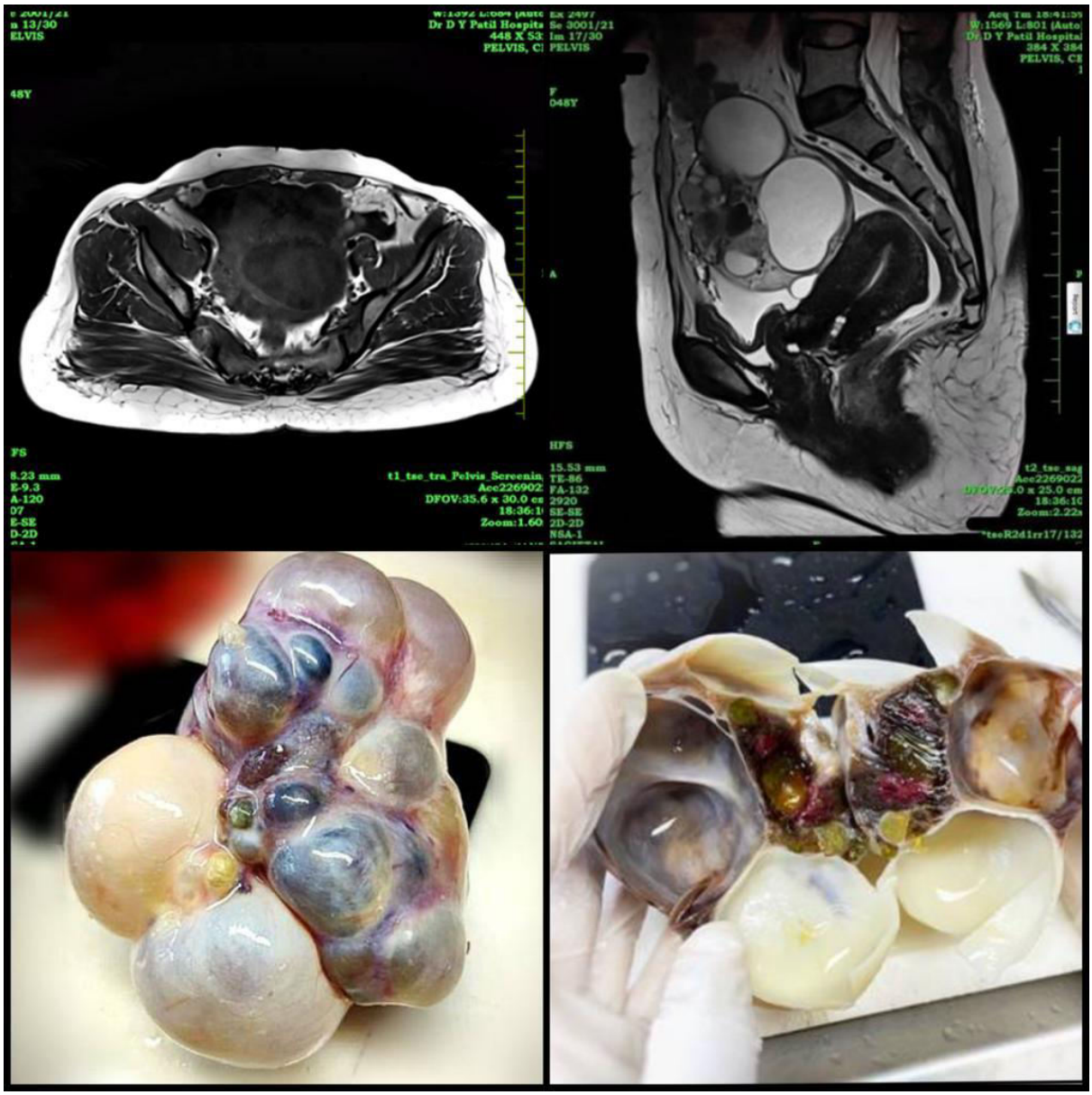

Figure 1(A-D): MRI image showing large, heterogenous multicystic lesion in pelvis. (A,B) Gross images show a bosselated external surface with areas of congestion. (C) Cut surface shows multiple locules of the cystic lesion. (D)

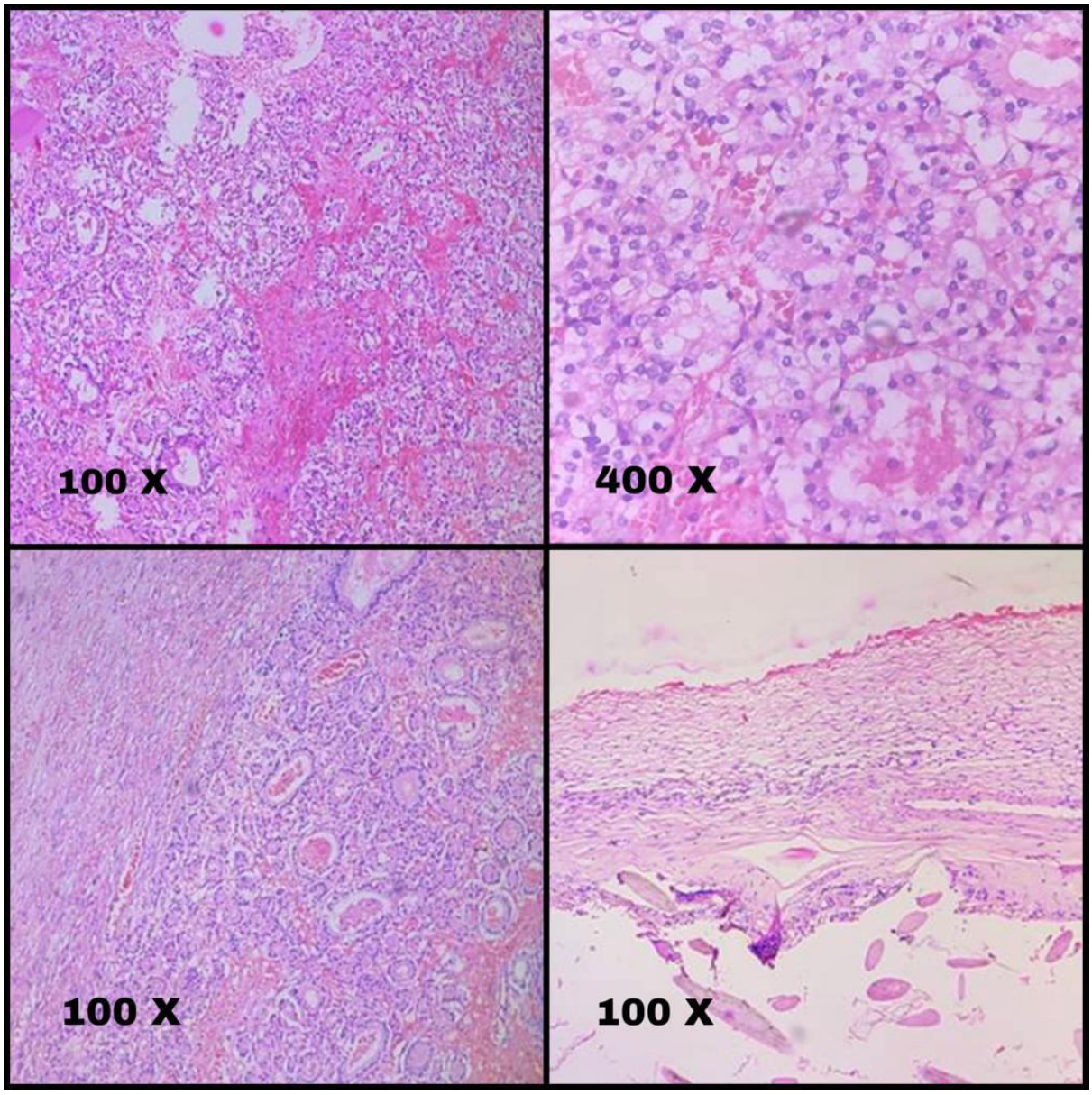

Figure 2(A-D): H&E-stained image showing areas with cells having clear to oxyphilic cytoplasm. Variable sizes of microfollicles and macrofollicles containing colloid are seen.