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Yolk Sac Tumor in a 43-Year-Old Woman

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Yolk sac tumors are uncommon and demonstrate rapidity in growth in young women. They are the second most common germ cell tumor following dysgerminomas. They are either pure or are associated with another form of germ cell tumor and can be highly polymorphic. Preservation of fertility is an important consideration in young patients. Chemotherapy and surgery are mainstays of treatment if patients present early. Prognosis is poor for patients who present late.

Keywords: Yolk sac tumor; ascites; ileo-ileal anastomosis and paracentesis.

1. INTRODUCTION

Yolk sac tumors are a subset of ovarian germ cell tumors (OGCT), which account for 15-20% of ovarian tumors but only 3-5% of ovarian malignancies. These tumors are common in the gonads [1-4]. They are very common in the younger population and are capable of malignancy quickly. Surgery and chemotherapy are modalities of treatment if diagnosed early. Outcomes can be poor with these treatment modalities if diagnosis is made late.

2. CASE PRESENTATION

A 43-year-old female presented with a one-year history of abdominal distension and shortness of breath. Her abdominal symptoms were treated as peptic ulcer for about a year. On examination, patient was in good health. Abdominal distension and tenderness were noticed.

Ultrasound examination showed large bilateral adnexal complex solid masses extending from the iliac regions to the umbilical area with irregular outlines surrounded by massive ascites. CT scan with contrast revealed abdomino-pelvic masses.

The patient was admitted and paracentesis was performed which yielded by five liters of straw-colored fluid daily for two days. Alpha feto-protein was 11, 227 ng/ml.

A laparotomy was performed and intraoperative findings include massive ascites of over 6 liters, large bilateral adnexal tumors, large mesenteric tumor with whitish deposits on the intestines and the uterus. A total abdominal hysterectomy and bilateral salpingo-oophorectomy with resection of the msesenteric tumor and ileo-ileal anastomosis were performed. Histology revealed a yolk sac tumor and patient was referred to oncology.

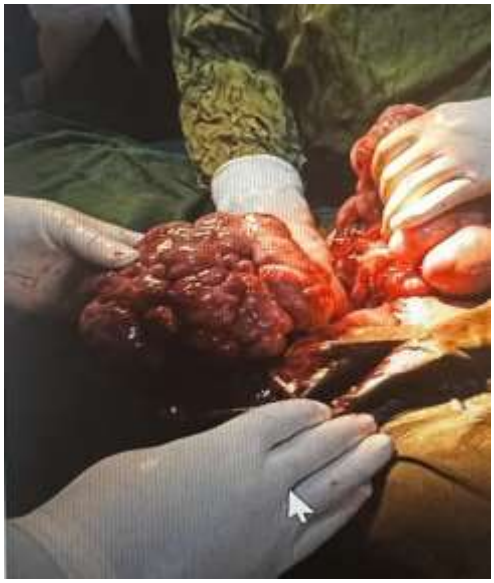

Fig. 1. Yolk sac tumor in the specimens

3. DISCUSSION

Yolk sac tumor is the second most frequent ovarian germ cell malignancy, after dysgerminoma. In perimenopausal and postmenopausal females, they are extremely infrequent and typically manifest in childhood, adolescence, and early adulthood. The prognosis and clinicopathologic characteristics of older individuals may differ from those of younger

patients. We discussed a case that was identified at a private healthcare center.

Non-epithelial ovarian neoplasms have the same international federation of gynecology (IFG) categorization. A Yolk sac tumor is an endodermal non-dysgerminoma. Most often unilateral with a diameter of 5 cm to 50 cm, the typical clinical presentation is rapid abdominopelvic distension, pain is the main revealing symptom and could sometimes lead to urgent surgery, especially in case of ovarian torsion [5]. Other symptoms could include pelvic masses, menorrhagia, ascites, fever, and symptoms related to infection [6].

Imaging showed a hypervascularized solido-cystic picture with intratumoral bleeding zones and uneven contrast enhancement [7]. Ultrasound can diagnose, define, and demonstrate ascites or hepatic metastases. CT scan detects cancer and lymphoma MRI demonstrates the hyper-vascularized and hemorrhagic tumor, even though lymph node involvement is infrequent [8].

Alpha-fetoprotein was a specific sign; the association of an adnexal mass with an elevated AFP level was specific to a vitelline component, allowing diagnosis with quasi-certainty even before histological proof and guiding surgery in young women [9]. The characteristic histological component was microcystic cell growth.

A case series study of 52 cases of yolk sac tumor [10] evaluated long-term fertility results: among 40 patients who underwent conservative surgery, 39 of them recovered a regular menstrual cycle after chemotherapy, 1 patient had intermittent ovarian dysfunction under second-line chemotherapy for relapse, the average time to cycle recuperation after BEP protocol was 5 months, and pregnancy was achieved in 12 of 16 patients who attempted conception. The national comprehensive cancer network (2016) recommends AFP surveillance every 2 to 4 months for 2 years in patients who achieved complete clinical response. To detect eventual recurrence, imaging may be considered since many case reports suggest chemotherapy-treated germ cell tumor patients may later present with growing teratoma syndrome.

4. CONCLUSION

After dysgerminoma, the tumor of the ovarian yolk sac is the second most frequent germ cell neoplasm. To establish whether an ovarian mass can be surgically removed while retaining fertility, germ cell tumor markers must be applied to each mass. The current gold standard is adjuvant chemotherapy following a fertility-preserving surgery.

CONSENT FOR PUBLICATION

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

ETHICAL CONSIDERATION

Informed consent was obtained from the patient to allow the reporting of this case as well as the use of her intraoperative picture.

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AVAILABILITY OF DATA AND MATERIALS

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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