Case report

YOLK SAC TUMOR IN A 43 YEARS OLD ~~P6A6~~ WOMAN FROM A PRIVATE HEALTH CARE FACILITY IN NIGERIA.

ABSTRACT

Background: 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. Though 60 percent of children have the most prevalent ovarian cancers. They can go through either germinomatous or embryonic differentiation because they are produced from early gonad germ cells. They occur more frequently relative to other countries in North America and Western Europe~~ in Japan~~.

Case Presentation: Our patient is 43 years old ~~P_6A_6~~ woman who presented with 5 days history of abdominal swelling with 2 days history of shortness of breath. The patient has been complaining of abdominal discomfort over 1 year prior to the presentation but she was being treated for peptic ulcer. There was a history of use of implants for about 5 years. CT scan with contrast revealed abdominal-pelvic masses with massive ascites without confirming the origin of the masses. Abdomino-pelvic ultrasound revealed huge bilateral adnexal complex solid masses (149 x 130mm, 155 x 122mm) extending from the iliac regions to the umbilical area with irregular outlines and surrounded by massive ascites. The patient was admitted and paracentesis was done which yielded 5 liters of straw-colored fluid daily for 2 days. Her booking investigations were as follows: Viral screening = non-reactive, RBS = 96mg/dl, PCV = 32%, Blood group= 0 Rhesus +positive, LFT -NAD, S/E/Ur/Cr – NAD. Alpha Feto Protien was 11, 227 ng/ml. The patient was worked up for exploratory laparotomy and the intra-operative findings include: Massive ascites of > 5L, Huge bilateral adnexal tumors (160 x 130CM, 145 x 135 cm), Huge mesenteric tumor with some whitish deposits on the intestines and the uterus, and EBL = 800mls. Finally; TAH +BSO, resection of the mesenteric tumor, and ileo-ileal anastomosis were done and the whole specimens were sent for histology and the patient's stay in the hospital was uneventful. The histology revealed a Yolk sac tumor in the specimens. The patient was referred to the Oncology unit, NAUTH for expert management.

Conclusion: The tumor of the ovarian yolk sac is the second most common germ cell neoplasm after dysgerminoma. In order to determine whether or not surgery may be performed while preserving fertility, germ cell tumor markers should be used to evaluate every ovarian mass. Adjuvant chemotherapy following a fertility-preserving operation is the current gold standard.

KEYWORDS: YOLK SAC TUMOR, ASCITES, ILEO-ILEAL ANASTOMOSIS, AND PARACENTESIS.

Introduction

Yolk sac tumors of the ovary (YST), also known as endodermal sinus tumors (EST), are uncommon and extremely dangerous tumors that affect children and young adults. When the disease first emerged, the prognosis was exceedingly bad and it was virtually always fatal. The ability to perform fertility-preserving surgery has been made possible by the development of chemotherapeutic regimens over the past few decades, which has resulted in a significant improvement in survival rates.(1)

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. Though 60 percent of children have the most prevalent ovarian cancers. They can go through either germinomatous or embryonic differentiation because they are produced from early gonad germ cells. They occur more frequently relative to other countries in North America and Western Europe. in Japan ??? not clear ??(up to 19 percent of ovarian cancers)-(2).

The second-most frequent type of ovarian cancer is yolk sac tumors. The second most common type of ovarian cancer (MOGCT) is dysgerminoma, which accounts for around 20% of all germ cell malignancies.(3)

An uncommon cancer of the ovary called a yolk sac tumor (YST) typically affects children and young adults under the age of 35 years. The median age spans from 13.8 to 25 years, according to studies of YST. Abdominal mass, abdominal swelling, abdominopelvic discomfort, and fever are the four most frequent symptoms at diagnosis. Alpha-1-fetoprotein (AFP) elevations are nearly universally observed. The prognosis is poorer for YST since it is a highly aggressive tumor that spreads early intra-abdominally. (4)

Comparatively to other germ cell cancers, yolk sac tumors exhibit a wide range of histologic characteristics. Its histologic variety and propensity to resemble somatic tumors when arising outside of the normal age range or in extragonadal locales can make diagnosis difficult. (1)

Because it frequently manifests in young women, fertility-sparing surgery is frequently performed, then chemotherapy is administered. (2)

Case Presentation

Our patient is 43 years old ~~P_6A_6~~ woman who presented with 5 days history of abdominal swelling with 2 days history of shortness of breath. The patient has been complaining of abdominal discomfort over 1 year prior to the presentation but she was being treated for peptic ulcer. There was a history of use of implants for about 5 years. CT scan with contrast revealed abdominal-pelvic masses with massive ascites without confirming the origin of the masses.

Abdomino-pelvic ultrasound revealed huge bilateral adnexal complex solid masses (149 x 130mm, 155 x 122mm) extending from the iliac regions to the umbilical area with irregular outlines and surrounded by massive ascites.

The patient was admitted and paracentesis was done which yielded 5 liters of straw-colored fluid daily for 2 days. Her booking investigations were as follows: Viral screening = non-reactive, RBS = 96mg/dl, PCV = 32%, Blood group= 0 Rhesus +positive, LFT -NAD, S/E/Ur/Cr - NAD

The patient was worked up for exploratory laparotomy and the intra-operative findings include: Massive ascites of > 5L, Huge bilateral adnexal tumors (160 x 130CM, 145 x 135 cm), Huge mesenteric tumor with some whitish deposits on the intestines and the uterus, and EBL = 800mls.

Finally; TAH +BSO, resection of the mesenteric tumor, and ileo-ileal anastomosis were done and the whole specimens were sent for histology and the patient's stay in the hospital was uneventful. The histology revealed a Yolk sac tumor in the specimens (Figure 1). The patient was referred to the Oncology unit, NAUTH for expert management.

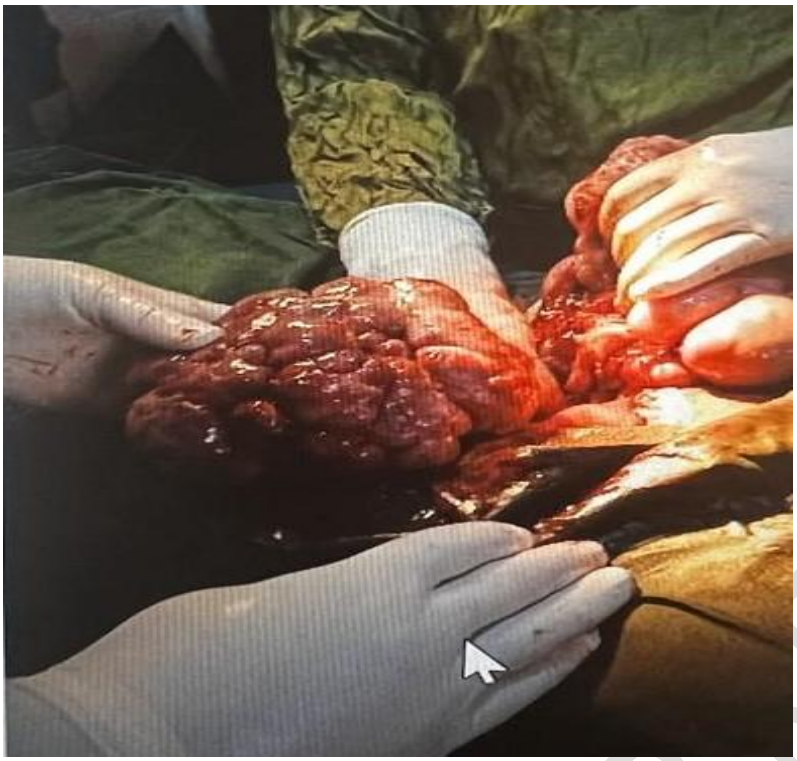

Fig 1. Yolk sac tumor in the specimens

Discussion

The second most frequent ovarian germ cell malignancy, after dysgerminoma, is YST's. 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. Here, 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 showeds 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 detected~~s~~ cancer and lymphoma MRI demonstrated~~s~~ the hyper-vascularized and hemorrhagic tumor, even though lymph node involvement ~~i~~was infrequent [8].

Alpha-fetoprotein ~~is~~ was a specific sign; the association of an adnexal mass with an elevated AFP level ~~is~~ 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~~is~~ 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 recovered a regular menstrual cycle after chemotherapy, one 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.

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.

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.

Ethics approval and consent to participate

Not applicable.

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

Availability of data and materials

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

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