

Case Report

Bilateral Large Complex Ovarian Tumours (Dermoid Cyst) in a Young Unmarried Girl

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Abstract

Complex bilateral ovarian tumours in young girls present management challenge. Preoperative investigations have limitations and surgeon aims at conserving reproductive function. Complications involving these cysts include torsion, rupture, infection and carcinoma ovary. The treatment involves laparoscopy or conventional surgery for removal of these tumours. A case of large bilateral mature cystic teratomas in a young unmarried girl is presented. Appropriate surgical management may preserve reproductive function for limited time interval. Due to loss of major portion of ovarian tissue, early child bearing is recommended. Long term biphasic hormone replacement therapy may be required.

Keywords: Mature cystic teratoma, Dermoid cyst, Bilateral.

Introduction

Germ cell tumours are commonest ovarian tumours in early twenties. The most common form of benign germ cell tumour is Mature Cystic Teratoma (Dermoid cyst). Benign germ cell tumors form around 50 percent of ovarian tumors in young girls. Ten percent of dermoid cysts can be bilateral. Their characteristic distressing presentation is in the first two decades of life and the risk of malignancy is inversely proportional to the age of the patient. Malignant ones in this age group constitute only 0.9 percent of all childhood malignancies.¹

Dermoid cysts can contain elements of all tissue types including ectoderm, mesoderm and endoderm.

There can be skin, hair follicles, sweat glands, pockets of sebum, blood, fat, bone, nails, teeth, cartilage and occasionally thyroid tissues. Hence ultrasound appearance of tumour can range from homogenous to solid cystic areas. Because of high fat content present in dermoid cysts, MRI is particularly useful in making the diagnosis.²

Small dermoid cysts are asymptomatic, but they vary in size and grow over time. Presentation is usually incidental on pelvic scan or as acute abdomen as a result of torsion of ovary resulting in ischemia of ovary. Management of unilateral ovarian tumour is generally oophorectomy. It is bilateral ovarian tumour, in young girls, which present management challenge. All efforts should be made to conserve

some ovarian tissue during surgery. Torsion may require complete excision of ovary, if ovary is viable then cystectomy can be performed either conventionally or laproscopically.

A case of large bilateral mature cystic teratomas in young girl is reported, which was managed by enucleation of dermoid cysts and conservation of ovarian tissue, though minimal.

Case Report

A young female, 24 years of age presented in the Outpatient Department of Obs/Gynae at Military Hospital, Rawalpindi on 16 June 2015 with history of dull bilateral abdominal pain for two months and moderate colicky pain left lower abdomen for last 2 days. Her menstrual cycles were regular with normal flow. There was no history of dysmenorrhea or vaginal discharge. There was no relevant past medical surgical or family history. She had her marriage planned after 2 months.

On physical examination, the patient was of lean built, adequately nourished with no signs of pallor or lymphadenopathy. She was 5 feet 2 inches and her weight was 54 kg. Her vitals were normal and systemic examination revealed a scaphoid shaped abdomen with tenderness left lower abdomen. Two masses were felt in lower abdomen separately, arising from pelvis, right larger than left, with smooth surface and limited mobility. (Figure 1) Bowel sounds were audible on auscultation. Digital vaginal examination was omitted as patient was unmarried.

Ultrasonography showed bilateral complex adnexal masses for which CT scan was advised CT Pelvis showed a thick walled cyst in left adnexa measuring 8.9 x 9.5 x 5.2 cm corresponding to 219 ml. It showed low attenuation fat density (average HU

density ~140 to ~160) in it. It also showed presence of hypodense acute hematoma in it measuring 3.9 x 4.2 cm. Evidence of calcification was found along the antero-medial wall. A right sided cyst measuring 11.4 x 9.9 x 10.1 cm was seen corresponding to 616 ml of volume. Evidence of lobulated calcifications along the anterior wall and multiple fat fluid levels were seen. The cyst was pushing urinary bladder and uterus anteriorly and towards the left side. The right iliac vessels were displaced laterally and it had clear interface with surrounding viscera.



Figure 1: Right dermoid cyst larger than the left one.

USG guided FNAC of both adnexal lesions, was assessed by histopathologist at AFIP and revealed degenerated anucleated squamous cells with pink proteinaceous material and was suggestive of Benign (Dermoid) Cyst. About 6 ml of thick yellowish fluid was aspirated from right adnexal lesion and was sent for cell cytology, there was no evidence of malignancy.

Blood complete picture was done prior to planning laparotomy which showed Hb of 9.1 gm/dl and PCV, MCV and MCH of 0.28 l/L, 63 fL and 20.3 pg respectively. Her ABO grouping and Rh-D revealed

BEE Positive. Her CA 125 levels was 72.9 U/ml with alpha fetoprotein of 1.77. Her liver and renal function tests and serum ferritin levels were normal. Diabetic and hepatic profiles were unremarkable.

Laparotomy was planned. Abdomen was opened through right para-median incision. On opening the peritoneal cavity bilateral adnexal masses were visible and were adherent to the pelvic side walls. (Figure 2)



Figure 2. Uterus in the middle, left dermoid cyst with tubular structure visible.

Peritoneal washings were taken for cytology as there was no ascitic fluid. Left dermoid had undergone torsion twice. An additional cyst 3x4cm in right tube was seen. Right fallopian tube was anomalous and was replaced by cystic structure which was subsequently removed. Left fallopian tube was edematous and hypertrophied but ovary appeared pink just like right ovary. Right ovarian tumour was fixed in Pouch of Douglas due to adhesions which were separated by blunt dissection to bring ovary out of pelvis. Uterus was absolutely normal. Survey of rest of abdominal cavity did not reveal any abnormality. Cysts were removed, little ovarian stroma was preserved with difficulty. Hemostasis

was secured and abdomen was closed in reverse order, keeping a drain in situ. Post operatively recovery was uneventful and she was discharged on second post-operative day, having drain and cannula removed. She was advised follow up with histopathology report on tenth post-operative day, for assessment of patient and counseling of family regarding further management.

Discussion

About 15-25% of ovarian neoplasms are Mature Cystic teratomas. In 10-15% of cases, the presentation is bilateral. They are composed of well-differentiated germ layer derivatives including endoderm, mesoderm and ectoderm.³ Mature cystic teratomas are the most widely recognized germ cell tumors of the ovary in reproductive age and are normally asymptomatic until they reach large size. Despite the fact that they occur basically in reproductive age, yet they can happen at any age including the post-menopausal stage. Most are 5-10 cm in size, when analyzed by dissection, they normally contain thick sebaceous material, tangled hair and different dermal structures.⁴

One of the major complications involved is torsion, either a partial or complete twisting of the ovarian suspensory pedicle causing severe pain, nausea and tissue necrosis. Malignant transformation is rare, occurring in around 0.1-0.2% of cases usually in older women. Ovarian teratomas have a predisposition to right lateral side.⁵ Co-existing Endometriosis with bilateral dermoid cysts of the ovaries is a rare occurrence although both benign conditions are said to be common in women in reproductive age group.^{6,7} This association has a clinical relevance because an endometriotic

pathology can reveal a silent teratoma with bilateral ovarian localization.

The clinical presentation varies from incidental finding on pelvic scan to acute abdomen in case of ovarian torsion. Ultrasound examination, tumour markers and CT/MRI are useful investigations.

Treatment of unilateral dermoid is by oophorectomy if other ovary is normal. Surgery of dermoid cyst is not an emergency procedure unless the dermoid cyst ruptures, becomes inflamed, or causes pain or fever, when immediate laparotomy is recommended. The main stay of treatment depends also upon the patient's age. In younger ones, removing the dermoid cyst while still leaving behind normal ovary tissue for needed hormone benefits or future pregnancy is the preferred option. Autoimmune hemolytic anaemia has been noted especially in patients with mature cystic teratoma.⁸ Follow up ultrasound to assess ovarian follicular reserve as well as antimullerian hormone AMH can be useful in planning further management. Early child bearing anticipatory to premature ovarian failure (POF) or long term HRT are management options.

Conclusion

The case is reported due to the rare nature of bilateral presentation of ovarian dermoid cyst and management challenge. In case of diagnostic dilemma biopsy of tumour may help in planning appropriate/ optimum management. Conservative surgery to retain reproductive function is recommended unless malignancy is confirmed. Spontaneous menstruation post-operative is

considered a good evidence of ovarian hormonal activity. In this case parents were counselled post operatively regarding need of follow up visits, continuing with previous planned wedding 2 months later and early child bearing. Patient was advised AMH test for follow up to assess ovarian reserve. Possible need for long term combined hormone replacement therapy was also discussed.

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