An Unusual Case of Bilateral Ovarian Dermoid Cyst in an Infertile Woman - A Case Report

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INTRODUCTION

Dermoid ovarian cysts or benign cystic teratomas are benign germ cell tumours which make up to 10 to 25% of all ovarian tumours. These are usually found in women of reproductive age group with peak age between 25 and 45 years. Of all cystic tumours of the ovary, 5 to 10% are dermoid cysts. These are bilateral in 12 to 15% of cases.

Mature cystic teratomas account for 10–20% of all ovarian neoplasms and are the most common neoplasms in patients younger than 20 years of age. Mature teratomas are usually benign, but in 0.1–0.2% of cases, they may undergo malignant transformation.[1]

The word “teratoma,” initially coined by Virchow in 1863, originates from the Greek word teraton, meaning monster. The term “dermoid cyst” used much earlier for the same entity was coined by Leblanc in 1831.[2] These are initially asymptomatic but can become symptomatic and present with symptoms like pain in the abdomen, anorexia, bloating, and an increase in size. Other complications are torsion, rupture, and infection. They are usually unilocular with smooth surfaces containing sebaceous material with hair, lined by squamous epithelium. Tissues like cartilage, bone, teeth, bronchial mucosa and thyroid tissue can be found in the wall. They have tissues from all three germ layers but ectodermal structures predominate. Diagnosis is usually made by ultrasound scan. Dermoid cysts have a characteristic appearance on ultrasound. Ultrasound findings include the presence of a Rokitansky nodule, fat fluid levels, dermoid mesh, and the “tip of the iceberg sign”.[3] CT scan and MRI can also be used. Management includes surgical excision by laparotomy or laparoscopy.

PRESENTATION OF CASE

A 30-year-old married woman with a marital life of 2 years presented to the OPD with complaints of heaviness in the lower abdomen for one month. She was investigated subsequently where an incidental finding of the bilateral dermoid cyst was made. She had undergone exploratory laparotomy with bilateral ovarian cystectomy and followed up further.
A 30-year-old multigravida, with marital life of 2 years presented with heaviness in the lower abdomen for one month. There was no history of pain abdomen, bowel and bladder dysfunction, loss of appetite, or loss of weight. Her menstrual cycles were regular. She gave a history of taking infertility treatment, 6 months back but no records were available.

She was a known case of diabetes and hypertension for one year and was on medication. In family history, her sister had undergone surgery for ovarian masses at 20 yrs of age.

On general examination, the patient was thin built with a BMI of 18. There was no pallor, icterus, oedema, or lymphadenopathy. All her vitals were stable. Breast and spine examinations were normal.

Per abdomen, examination revealed a firm non-tender mass of around 16-18 weeks arising from pelvis, bilobed, smooth surface, mobile from side to side. Upper and lateral borders were well defined, and the lower border was not felt. There was no evidence of free fluid in the abdomen. Bowel sounds were present.

Vaginal examination revealed a normal anteverted uterus with 2 separate masses from the right and left fornices respectively.

The patient was investigated thoroughly. Her routine investigations were normal, CA 125 was 20.6. Her USG report findings showed evidence of a well-defined echogenic lesion 7.7 * 2.7 in the right adnexa and evidence of a well-defined heterogeneous lesion 11.6 * 9.3 with echogenic and dense homogeneous internal echoes in the left adnexa.

CT scan showed evidence of two well-defined hypodense fat attenuating cystic lesions with calcified foci noted with size 11.7 × 7.6 × 6.5 arising from the right ovary and 11.6 × 9.7 × 9.3 from the left ovary with peripherally displaced ovarian follicles on both sides likely suggestive of bilateral dermoid ovarian cyst.

After the anaesthesia evaluation, the consenting patient was taken for exploratory laparotomy. Operative findings were an anteverted uterus off normal size, a left dermoid cyst of size 15 ×12 cm with an intact capsule, no adhesions with surrounding structure, with the fallopian tube stretched over it. Right ovarian cyst of size 10 × 10 cm with corpus luteal cyst was noted.

Bilateral ovarian cystectomy was performed leaving behind significant ovarian tissue. Cut section of ovarian masses showed plenty of sebaceous fluid with a tuft of hair and histopathological examination confirmed the diagnosis of bilateral dermoid ovarian cyst.

The postoperative period was uneventful. She was discharged on the 7th post-op day after suture removal. The patient came for a follow-up after 1 month; she had regained a regular menstrual cycle.

Dermoid cysts are usually asymptomatic, and many cases are discovered incidentally on imaging. A review of 517 cases of dermoid cysts found that 60% of patients were asymptomatic at the time of diagnosis, 11% of patients had their tumours found incidentally at the time of laparotomy, and 39% of patients were symptomatic. If symptoms are present in women with dermoid cysts, abdominal pain is the most common complaint followed rarely by increased abdominal girth, palpable abdominal mass, constipation, nausea, vomiting, and anorexia. O’Neill and Cooper reported a case of a 17-year-old woman with a bilateral
adnexal mass consistent in appearance with a dermoid cyst on a CT after a motor vehicle accident.

She underwent exploratory laparotomy (ovarian cystectomy) with histopathology confirming the presence of a bilateral ovarian dermoid cyst. Three years later she had a recurrent dermoid cyst which was expectantly managed with serial ultrasounds and after 24 months slow but visible growth of the mature cystic teratoma was confirmed.[5]

Dermoid cysts can sometimes be coexisting with parasitic intra-abdominal dermoid cysts or localised in other sites like the pouch of Douglas or uterosacral ligament.[6]

A case report described a woman with 4 dermoid cysts and 1 in the contralateral ovary,[7] whereas another report described a patient with 7 in the left and 3 in the right ovary respectively.[8]

The residual ovarian tissue should be carefully examined when performing laparotomy, it should also be checked for accessory ovaries which can be sites for dermoids. For benign ovarian disorders in young women, conservative surgery is performed for the maintenance of the normal menstrual cycle and in optimizing future fertility.[9]

**CONCLUSIONS**

A bilateral dermoid cyst in a nulliparous woman is a challenging situation as a considerable amount of ovarian stroma has to be preserved for menstrual function and future fertility. They usually present with non-specific symptoms therefore early recognition and intervention can help in avoiding complications.

**REFERENCES**