

## Bilateral mature cystic teratoma of ovary: A rare case presentation

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### Abstract

Mature cystic teratomas are ovarian neoplasms derived from two to three germ cell layers i.e. ectoderm, mesoderm and endoderm. Ovarian teratomas are usually benign tumours of the reproductive age group. They usually have right-sided predisposition. However, only 10-20% of these neoplasms may have bilateral presentation. Here, we present a rare case of bilateral mature cystic teratoma of ovaries in a 32 years old multigravida female who presented with pain lower abdomen from one month. Ultrasonography showed bilateral solid-cystic adnexal lesions along with calcifications in the left adnexal mass. Serum level of CA-125 was within normal range. Laparoscopic bilateral oophorectomy was done along with bilateral tubal ligation. The histopathological examination confirmed the diagnosis of bilateral mature cystic teratoma of the ovaries.

**Keywords:** Benign, Cyst, Dermoid, Ovary, Teratoma.

### Introduction

The term "teratoma" is derived from a Greek word "teraton" meaning monster. The term was initially coined and used by Virchow in the year 1863. In the year 1831, Leblanc coined the term "dermoid cyst" for these neoplasms. In some cases of teratomas, Rokitansky's protuberance can be seen. It is an area of projection covered by skin, sebaceous glands and sometimes bone and teeth may also be seen. Histological sections from this area must be taken. Dermoid neoplasms of the ovary are usually asymptomatic tumours of the reproductive age group females. Rarely, they can present as bilateral neoplasm and in such cases the chances of tumour recurrence are also increased. Here, we present a case of 32 year old multigravida female who presented with bilateral mature cystic teratoma of ovaries.

### Case Report

A 32 year female patient presented with pain lower abdomen for one month and pain in both the legs for last 2 years. The patient was multigravida, para 3 and had normal, regular menstrual cycles. Per abdomen examination revealed soft abdomen with mild tenderness. On per speculum examination, the cervix was hypertrophied. On per vaginal examination, the uterus was anteverted and a mass was felt through the right fornix, measuring 4cm in diameter whereas the left fornix was clear. Pap smear taken was reported as Negative for Intraepithelial Lesions or Malignancies (NILM). Complete blood counts, urine examination, serum electrolytes, liver function test and renal function tests were normal. Ultrasonography showed bilateral solid-cystic adnexal lesions along with calcification in the left adnexal mass. Serum level of CA-125 was

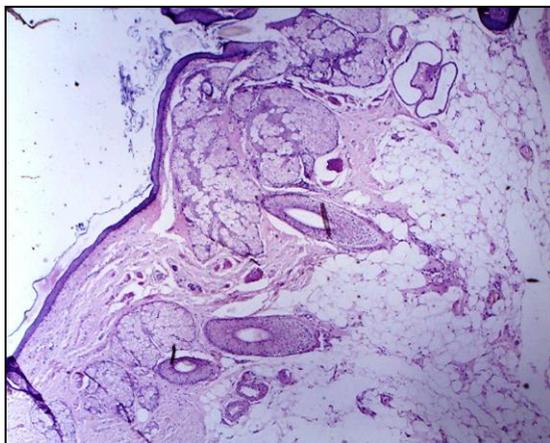
within normal range (29.2U/mL). Laparoscopic bilateral oophorectomy was done along with bilateral tubal ligation. Both the ovaries were sent in separately labelled containers for histopathological evaluation. Right ovary measured 2.5x2.3x2 cm. Left ovary was received in 2 pieces measuring 4x3x2.6cm and 3x2.6x1cm. Grossly, both the ovaries were cystic and on cut section lumens were filled with sebaceous material and tufts of hair. A tooth was identified attached to the left ovarian outer surface. [Fig 1 & 2] Microscopic examination of both the ovaries showed ovarian cyst walls lined by stratified squamous epithelium, pseudostratified columnar epithelium, adnexal structures like hair follicles, pilo-sebaceous units, sheets of foamy macrophages along with foci of mature cartilage and mature adipocytes. The cyst cavity contained keratinous material. The wall showed mononuclear inflammatory infiltrate, foreign body giant cell reaction and large areas of haemorrhage. Thus, on histopathological examination the diagnosis of bilateral mature cystic teratoma of the ovaries was rendered. [Fig. 3 & 4]



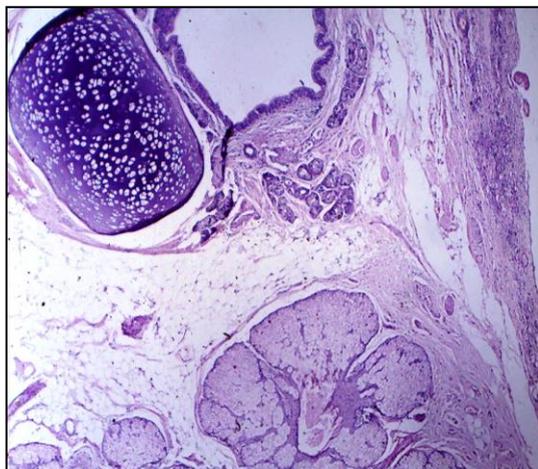
**Fig. 1: Right ovary was grossly cystic and on cut section the lumen was filled with sebaceous material and tufts of hair**



**Fig. 2:** Left ovary was grossly cystic and on cut section lumen is filled with sebaceous material and tufts of hair. A tooth was identified attached to the left ovarian outer surface



**Fig. 3:** Microscopic examination of the Right ovarian cyst wall show lining of stratified squamous epithelial cells along with presence of pilo-sebaceous unit, hair follicle and mature adipocytes. (H&E X100)



**Fig. 4:** Microscopic examination of the Left ovarian cyst wall show presence of pilo-sebaceous unit, lining of pseudo-columnar epithelial cells, mature cartilage and adipocytes. (H&E X100)

## Discussion

Dermoid cyst contains tissues from all the three germ cell layers, these are ectoderm, mesoderm and endoderm with preponderance of ectodermal tissue. Thus, the term dermoid cyst is a misnomer. Teratomas account for 10-20% of all the ovarian neoplasms.<sup>1</sup> Only 10-20% of these neoplasms are bilateral.<sup>2</sup> Teratomas are usually benign and tumour size rarely exceeds more than 10 cm. However, in 0.2-2% cases these neoplasms may also undergo malignant transformation.<sup>3</sup> They usually contain thick sebaceous material, tufts of hair and adnexal structures. Teeth, bone, mature cartilage, thyroid tissue and bronchial mucosal membrane etc can also be noticed. Teratomas are mostly noted in child bearing age group and very rarely in adolescents females. The lowest age of 9 years was reported in two female patients. One of them had a unilateral mass whereas the other had bilateral neoplasms. However, the tumour size was less than 10cm in both these cases. In a study, El-Agwany et al reported bilateral mature cystic teratomas of more than 10 cm size in a 35 year old female patient.<sup>4</sup> Teratomas are mostly diagnosed by ultrasonography. However, CT scan may also help visualize the nature of neoplasm, when suspicion of malignancy is being considered.<sup>5</sup> Mature cystic teratomas of ovaries are most often asymptomatic neoplasms with an indolent course. These neoplasms cause symptoms only rarely when they lead to pressure symptoms resulting due to increase in tumour size or rarely when they undergo torsion. An extremely rare complication is rupture of the cystic neoplasm, which may present in the form of perforation peritonitis. Mostly cystectomy or oophorectomy are the modes of patient management. Treatment depends on factors like age, fertility, requirement of ovarian tissue preservation and whether one or both the ovaries are involved. Tumour recurrence may occur even after 1-15 years of surgical removal. Major predictive factors for tumour recurrence are young age, bilateral presentation and tumour size more than 8cm. If a patient has all these three factors the chances of tumour recurrence post surgical removal increase by 21.6%.<sup>6,7</sup>

## Conclusion

Although ovarian teratomas are common and have an indolent course, we present this case because of its rare bilateral presentation. Due to the increased chances of recurrence, the patient should be advised for periodic ultrasounds and regular check-ups in the future.

**Conflict of Interest:** None

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