



## **Bilateral Huge Ovarian Mature Cystic Teratoma in a Primipara: A Case Report**

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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**

**Background:** Mature cystic teratoma (MCT) also known as dermoid cyst is the commonest benign neoplasm of the ovary constituting 10-20% of all the ovarian tumours. They are also the most common ovarian germ cell tumour commonly seen between 20-40 years. They are bilateral in 8-15% of cases.

**Objective:** To report a rare case of bilateral ovarian mature cystic teratoma occurring in a primipara.

**Methods:** The case note of the patient was retrieved, relevant information about the patient, her clinical presentation and management were reviewed. Relevant review of the literature on the subject was also done.

**Case Report:** The patient was a 23 year old primipara (alive) referred from a general hospital. She presented at the gynaecological clinic of Rivers State University Teaching Hospital (RSUTH) with a month history of abdominal distension and lower abdominal pain. There was associated nausea, vomiting and passage of watery stool. There was no history of fever, weight loss, vaginal discharge, urinary frequency or retention of urine. There was generalized abdominal tenderness more marked in the lower abdomen. She had exploratory laparotomy and bilateral ovarian

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cystectomy. She did well post operatively and was discharged home with a two weeks appointment to the gynaecological clinic.

**Conclusion:** Diagnosis of dermoid cyst is made earlier with pelvic ultrasonography when it is usually small. Unusual finding of a mature huge ovarian cystic teratoma is possible due to delayed presentation for diagnosis and treatment.

*Keywords: Benign; bilateral; cystectomy; dermoid cyst; laparotomy.*

## 1. INTRODUCTION

The word "teratoma" is derived from Greek word "teraton" which means monster. It was so named because it contains tissues derived from all the 3 germ cell layers of the ovary (ectoderm, mesoderm and endoderm) including hair, teeth, muscle, bone, thyroid tissue, skin, fat and sebaceous gland. Dermoid cysts are the commonest germ cell tumours of the ovary accounting for 10-20% of all ovarian tumours. They are common in patients between 20-40 years [1,2]. There are two types, mature and immature. The later is more likely to develop into malignant cancer. Dermoid cysts are further classified as cystic, solid and mixed. They are usually asymptomatic and accidentally discovered during surgery or ultrasonography for other conditions [1,3,4]. Pain due to torsion can occur, abdominal distension and bleeding may also occur when there is increase in size and rupture of the tumour. Infection is less common occurring in 1-2% of cases especially from coliform bacteria. Alpha fetoprotein, beta human chorionic gonadotrophin, CA-125 and CA 19-9 are elevated in MCT [5].

About 1-3% of mature ovarian teratoma are cancerous and usually occurs in postmenopausal women. A diameter of more than 10cm is also indicative of malignancy. Transformation to squamous cell carcinoma occurs most commonly (75%), followed by adenocarcinoma and carcinoid tumours [6-8]. 8-15% are bilateral increasing the risk of losing fertility [9-12]. Surgery is the treatment of choice and it is usually easy to remove the cysts since they are well encapsulated [1,2].

## 2. CASE REPORT

Mrs EW is a 23 year old para 1 (alive), who presented to the gynaecological clinic with one month history of abdominal distension and pain. The distension which was previously small and localized in the lower abdomen, progressively increased in size. There was associated dull continuous abdominal pain localized to the lower

abdomen. There was also associated nausea, vomiting and passage of watery stool. There was no history of fever, weight loss, vaginal discharge, urinary frequency, retention of urine or change in menstrual pattern.

On examination, she was not pale, afebrile, anicteric, her respiratory rate was 16 cycles per minute and her chest was clinically clear. The pulse rate was 80beats/minute and blood pressure was 100/70mmHg. Her abdomen was distended, tender especially in the lower abdomen. A cystic, non mobile mass compatible with a 20 weeks size uterus was felt. There was no ascites. Pelvic examination revealed normal vulva and vagina. The cervix looked healthy and the os parous. The uterus was anteverted and not bulky.

Her packed cell volume was 29%, white blood cell count was 6400/uL. Serum electrolytes, urea and creatinine levels were normal, CA-125 level was also normal and retroviral screening was seronegative. Urinalysis was normal. Urine and high vaginal swab microscopy, culture and sensitivity were normal. Abdominal ultrasound done revealed bilateral large abdomino-pelvic multiseptated cystic mass with solid components measuring 16 x 18 x 22cm and 14 x 16 x 20 cm in the right and left adnexae respectively containing low level echogenic debris.

The uterus was normal. A diagnosis of bilateral huge ovarian tumour was made and she was counseled on the diagnosis and the need for surgery. Two pints of blood were cross-matched and made available for the surgery. She was placed on nothing by mouth the night prior to day of surgery. Urethral catheter was passed and retained in the theatre and she received prophylactic antibiotics prior to surgery.

She subsequently had exploratory laparotomy, bilateral ovarian cystectomy and adhesiolysis. Findings at surgery were bilateral huge capsulated complex ovarian mass measuring 17x 18 x 18cm on the right and 14 x 16 x 18 cm on the left and moderate adhesions. The uterus

was normal in size. On dissection of the cysts, a thick yellow sebaceous fluid, copious hairs, teeth were seen. Estimated blood loss was minimal. The removed cysts were sent for histopathology which confirmed the diagnosis of bilateral mature cystic teratomas with sebaceous and keratinous materials as well as hair shafts and teeth. There was no evidence of malignancy. Post operatively she was continued on the intravenous fluid, parenteral antibiotics and analgesics for 48 hours, after which she was converted to oral drugs. Urethral catheter was removed within 24 hours. Her post operative packed cell volume on the second day was 28%. Her recovery was uneventful and she was discharged on the seventh day post operative day. She was seen in the gynaecology clinic 2 weeks later and she did not have any complaint. She was also clinically stable but thereafter she was lost to follow up.

### 3. DISCUSSION

Mature cystic teratomas are typically slow growing measuring between 5 and 10 cm, and are usually bilateral in approximately 10% of cases [1]. It's possible that this patient did not notice the tumour early enough before it grew to a large size since the tumour is mostly asymptomatic. Microscopically, endodermal or mesodermal derivatives may be found but ectodermal elements predominate. They may contain skin, hair follicle, sweat gland, sebum, blood, bones, nails and teeth [1,13]. In this case,

teeth, copious hairs and sebaceous materials were seen in the huge cysts. In a study of 283 cases of MCT in National Taiwan University Hospital, Wu et al. in 1996, found the youngest patient to be 12 years old and the oldest to be 76 years. Most patients were found in the age group of 20-30 years [14]. It is hypothesized that they are found in this age group because of their development from a single primordial germ cell which has completed meiosis I and where meiosis II is suppressed [11]. The patient was 23 years old belonging to the highest age group of occurrence of the cyst.

Mrs EW presented with abdominal swelling and pain which are common presentations of huge benign ovarian teratoma. Though the tumours were large and had probably developed over a long period, there was no evidence of malignancy. Malignant transformation of benign cystic teratoma is rare occurring most as squamous cell carcinoma [6-8]. According to Haranda et al. in 2013, young age (<30 years), large cystic size (diameter, >8cm) and bilateral cysts are predictive risk factors for reoccurrence, with the risk being especially high in the presence of more than one of these factors [15]. Mrs. EW benefitted from the surgery done for her as the symptoms disappeared thereafter. Unfortunately, she was lost to follow up. She would have benefitted from serial ultrasound scan to monitor the ovaries for any reoccurrence of the cysts.



**Fig. 1 Intact left ovarian cyst prior to bisection**



**Fig. 2. Intact right ovarian cyst prior to bisection**



**Fig. 3. Showing yellowish sebaceous tissue**



**Fig. 4.3 Showing wall of the cyst, hairs and teeth**

#### **4. CONCLUSION**

Bilateral benign cystic ovarian teratoma is rare. This case reported is to create awareness of

bilaterality of a huge tumour in a primipara and how management can affect future fertility of the patient. It is important during surgery to carefully examine the contralateral ovary for any

involvement. Also, during surgery for bilateral cysts, the surgeon has to be very careful in order not to be overzealous as this will affect the fertility of the woman.

### CONSENT AND ETHICAL APPROVAL

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors.

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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