CASE REPORT

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A case report of a 25 kg extraovarian “chocolate cyst” attached by a peduncle to the uterine fundus

Asaolu Oluseyi Ayoola, Undie Celsius Ukelina,
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ABSTRACT

Introduction: “Chocolate cyst” is a common presentation of endometriosis and mainly arises from the ovaries (endometriomas). **Case Report:** We present a case of a 43-year-old single nulliparous woman with a five year history of a progressively increasing, painless abdominal mass. Radiological investigations did not give a definite organ of origin but the ultrasound scan suggested it was extra-ovarian. The finding at exploratory laparotomy was that of a huge, 25 kg “chocolate cyst” (confirmed on histology) which was not of ovarian origin and was attached by a peduncle to the uterine fundus. **Conclusion:** This case report showed that extra-ovarian chocolate cysts can grow to huge sizes presenting diagnostic dilemma and can also be found on the uterine serosa, amongst other sites.

Keywords: Abdominal mass, Chocolate cyst, Computed tomography, Endometrioma, Extra-ovarian

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INTRODUCTION

Endometriosis is a relatively common benign gynaecological condition defined as the presence of functional endometrial tissue outside the uterine endometrial cavity. It affects about 6-10% of women in the reproductive age group and is characterized by chronic pelvic pain, dyspareunia, dysmenorrhoea and infertility [1, 2]. Another presentation of endometriosis is as endometriomas or “chocolate cysts” which are cysts lined by ectopic endometrial tissue usually on the ovaries [3]. These can be unilateral or bilateral and vary in size up to about 10-15 cm in diameter. There are reports of extra ovarian chocolate cysts found in different sites; broad ligament, anterior and posterior cul de sac, anterior abdominal wall surgical scar etc The size and location of the chocolate cyst seen in this patient was atypical and presented a diagnostic dilemma with the true nature of the cyst confirmed only after histological evaluation. Literature on this type of huge extra ovarian cyst also appear quite limited as none has been found to weigh this much.

CASE REPORT

A 43-year-old nulliparous woman who is an accountant presented to the Gynaecological clinic with complaint of

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a progressively increasing abdominal mass of five years duration. The mass which was initially noticed at the lower abdomen had been painless and not associated with any menstrual disturbances. However, with increasing size, she noticed the onset of pressure symptoms especially easy satiety. She had also noticed progressive weight loss though her weight had remained relatively unchanged in the last two years before presentation. There was no positive history of night sweats or contact with a diagnosed tuberculosis patient. She had presented in several hospitals where she was scheduled for surgery but never agreed to it because of the fear of its invasiveness and possibility that it could affect her ability to reproduce. She had no known co-morbidity.

On examination, we found a chronically ill-looking patient who was not pale, anicteric, acyanosed, not dehydrated with bilateral pitting pedal oedema. Weight at presentation was 100.3 kg with body mass index of 35.2 kg/m². Her vital signs were normal except for a raised blood pressure and her chest was assessed to be clinically clear. The abdomen was grossly distended with shiny overlying skin and a flat umbilicus. There was no area of tenderness. The mass felt cystic and occupied all quadrants of the abdomen with indiscernible edges making palpation for abdominal organs difficult (Figure 1).

An abdominopelvic ultrasound scan revealed a massive uniloculated cystic mass with aqueous content and a dependent layer of hyper reflective echoes or debris occupying all abdominal quadrants and displacing organs. Doppler assessment did not report any increase in vascularity of the mass. Interestingly, the uterus and both ovaries were visualized and assessed to be normal in size and architecture and separate from the mass. A Computed tomography (CT) scan was requested for which reported a huge unilocular abdominopelvic mass of ovarian origin. Differential diagnoses were mucinous cystadenoma (extra-ovarian), abdominal tuberculosis, peritoneal cystadenocarcinoma and uterine leiomyosarcoma

Erythrocyte sedimentation rate (ESR) was slightly elevated -26 mm/hr. CA 125 was normal - 23.0 U/ml. Results of other investigations were unremarkable. These included an electrocardiogram (ECG), Full blood count (FBC), serum urea, electrolyte and creatinine, liver function test (LFT), tuberculosis (TB) antigen, clotting profile, urinalysis and serology screening for hepatitis and human immunodeficiency virus (HIV).

An exploratory laparotomy was performed with the general surgeon in attendance. The rectus sheath was thickened and highly vascular with dense adhesions between it and the mass. There was increased peritoneal fluid and vascular adhesions between the mass and bowel and also between the mass, gall bladder and inferior surface of the left lobe of the liver (Figure 2). The cystic mass attached to the uterine fundus by a peduncle about 5–6 cm thick and weight 25 kg small subserous fibroid measuring about 2 cmx4 cm in the posterior wall of the uterus and both ovaries had small simple cysts (Figure 3 & 4).

Figure 1: Gross abdominal distension by the endometrioma.

Figure 2: Huge endometrioma after adhesiolysis and exteriorisation to the operation field.

Figure 3: Broad base peduncle of the endometrioma, bilateral ovarian cyst and subserous leiomyoma.

There were no obvious endometriotic deposits in the pelvis. The mass was excised, fibroid removed and bilateral ovarian cystectomy performed. She had multiple blood transfusions (both intra and post-operatively) and peritoneal drains left in situ.

She had a relatively uneventful post-operative recovery. Weight at two weeks post operation was 69.1 kg with a BMI of 24.19 kg/m². Histologic evaluation of the mass revealed that it was a huge chocolate cyst measuring 50x40x30 cm, weighing 25 kg and with smooth shiny surface (Figure 5). Cut sections showed a unilocular cystic cavity containing 21.5 litres of chocolate coloured fluid (Figure 6). The inner lining of the cyst wall appears velvety with the cystic wall measuring 2 cm in its thickest portion and ragged projections into the lumen. Histology sections showed a thick fibrous wall and hemosiderin-laden macrophages (Figure 7). Most of the epithelium is desquamated with focal areas reminiscent of endometrial glands and fibrous stroma (Figure 8). No malignancy was seen. She remained stable six (6) months postoperatively.

DISCUSSION

Endometriosis is a relatively common gynaecological condition affecting 6-10% of women in the reproductive age group [3, 4]. It is the presence of functional endometrial glands and stroma outside the uterine cavity and is usually characterized by chronic pelvic pain and infertility. Risk factors for endometriosis include nulliparity, previous pelvic surgeries, imperforate hymen, cervical stenosis and gynaetresia [5]. Several theories have been proposed to explain the pathogenesis of the condition with the most popular theory being the retrograde menstruation. Others are the theory of coelomic metaplasia, immunologic theory, mullerianosis and transplantation theory. Another presentation of endometriosis is as a pelvic mass with the formation of an endometrioma [5].

Endometriomas, commonly referred to as “chocolate cysts” are a common presentation of endometriosis seen in about 17–44% of endometriosis and refers to cysts on the ovaries associated with ectopic endometrial tissue and containing degraded hemorrhagic content hence the appearance of a chocolate-coloured effluent when ruptured [4, 5]. It is thought that endometriomas form from deposition of endometriotic deposits with subsequent invagination of the underlying ovarian cortex. Although majority of chocolate cysts arise from the ovaries, a significant proportion have been found in other sites including the peritoneum overlying the anterior and posterior cul de sac, within the broad ligament and inguinal canal as well as uterine serosa [6, 7]. In addition, these cysts could be bilateral and are usually small to medium in size. However, a few have been reported to grow to very large sizes [8].

This case report presents an atypical presentation

Figure 4: Endometrioma after removal and placed in a large bowl for weighing.

Figure 5: Gross morphology of the endometrioma with its marked dimensions.

Figure 6: Cut surface of the cyst containing chocolate coloured fluid.

Figure 7: Area of desquamation of epithelium replaced by hemosiderin-laden macrophages.

Figure 8: Benign endometrial glands within a fibrous stroma.

of chocolate cyst. Firstly, the classical clinical features associated with endometriosis were not elicited in this patient notably cyclical abdominopelvic pain associated with menstruation. Secondly, the ovaries were unaffected and the cyst was attached to the fundus of the uterus by a thick peduncle. In addition, it grew to a massive size which is not common and was not seen to be associated with Deeply Infiltrative Endometriosis (DIE) in the pelvis.

Interestingly, although the abdomino-pelvic ultrasound scan reported that the mass was extra-ovarian which was confirmed at surgery, the abdominal CT scan erroneously reported the organ of origin as the ovary. Radiological features noted in this patient which were in keeping with those found in endometriosis include the fact that it was unilocular containing internal echoes though not the classical “ground-glass” appearance seen in endometrioma.

Endometriomas have been known to herald the presence of severe deeply infiltrative pelvic disease. However, there were no gross endometriotic deposits observed in the pelvis and both fallopian tubes and ovaries appeared relatively normal. The rarity and diagnostic dilemma presented by this type of huge extra ovarian endometrioma makes it worthy of presentation.

CONCLUSION

Extra-ovarian chocolate cysts can grow to huge sizes presenting diagnostic dilemma. Transvaginal ultrasound scan is still a very viable means of evaluating gynaecological patients and should not be totally replaced by more advanced radiological techniques such as CT scan and MRI. The presence of endometriomas or chocolate cysts does not always indicate severe pelvic disease. Hence, extra ovarian endometrioma should be entertained as a possible differential diagnosis in the evaluation of abdominopelvic masses.

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Author Contributions

Asaolu Oluseyi Ayoola – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Undie Celsius Ukelina – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Maimagani Amina Vivian – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Achusi Izuchukwu Ben – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor of Submission

The corresponding author is the guarantor of submission.

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Consent Statement

Written informed consent was obtained from the patient for publication of this case report.

Conflict of Interest

Authors declare no conflict of interest.

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