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Case Report

Laparoscopic Excision of a Huge Ovarian Endometrioma-A Case Report

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Abstract

Background: Endometriosis is a chronic disease requiring lifelong management maximizing medical treatment and potentially repeat surgical intervention. Each treatment plan takes into account the clinical presentation, symptom severity, disease extent and location, reproductive desires, patient age, medication side effects, surgical complication rates, and cost. Primary complaints of patients are dysmenorrhea, dyspareunia, infertility and chronic pelvic pain.

Case: A 26-year-old, nulliparous lady was referred for infertility with an ultrasound and computed tomography of bilateral ovarian masses. Ultrasonographically, a septate cyst 24.3 × 17.6 × 16.6 cm in dimension without neovascularization was diagnosed. Serum CA125 and CA19-9 levels were 70.4 and 383,1 U/ml, respectively. Left ovarian cystectomy was performed through laparoscopy and pathologic examination revealed an endometrioma. The cyst was 3.9 kgs in weight, 26 × 18 × 17 cm in dimension, and contains 3,800 ml of chocolate brown fluid.

Results: The patient had an excellent postoperative recovery.

Conclusion: We presented this case because of its rarity following an extensive literature review. An endometrioma as large as this one has been published before, but this was the largest amount of chocolate fluid that has ever been drained from a cyst. This is the first case ever reported in the literature with a large endometrioma that has ever been removed laparoscopically.

Keywords: *Laparoscopic Excision; Ovarian Endometrioma; Endometriosis*

Introduction

Endometriosis is a chronic disease requiring lifelong management maximizing medical treatment and potentially repeat surgical intervention. Each treatment plan takes into account the clinical presentation, symptom severity, disease extent and location, reproductive desires, patient age, medication side effects, surgical complication rates, and cost. Primary complaints of patients are dysmenorrhea, dyspareunia, infertility and chronic pelvic pain [1-3].

The gold standard approach to treating endometriosis-related pain is based on the severity of symptoms and desire for fertility. For women with mild to moderate pain, nonsteroidal anti-inflammatory drugs (NSAIDs) in combination with continuous hormonal contra-

ceptives is recommended (Grade 2C). These therapies are low-risk, have few side effects, are low-cost, and are generally well-tolerated compared with other medical therapies.

Women who wish to conceive can use NSAIDs alone. Women with adequate symptom improvement can continue with this regimen until pregnancy is desired or menopause is reached. Women whose symptoms do not improve continue NSAID treatment and are offered alternative hormonal suppression with a trial of gonadotropin-releasing hormone (GnRH) agonist with add-back hormonal therapy rather than surgical resection (Grade 2C). GnRH agonist treatment has demonstrated efficacy without the risks or negative impact on ovarian reserve of surgery. In women requesting fertility, NSAID therapy and surgery remain the therapy of choice.

Case Report

A 26-year-old, nulliparous lady was referred for inability to conceive over the past 12-months. As a result of her workup, she was found to have bilateral ovarian masses based on ultrasonography and computed tomography. The cyst was stable in size and her main complaints was that of infertility. Once directly asked, she did note that she has been having pelvic pain since age 15 which she was told to be normal for a girl of her age. She rates her pain as a 9 out of 10 and takes oral Advil or Robaxacet for pain relief. She denied any allergy to any medication. Her operative history is unremarkable, while her family and social history reveal that she does not smoke but drinks on occasional basis. Currently, her mother and her sister have endometriosis.

She has had no vaginal deliveries in the past. She attained menarche at the age of 12, Her periods have been regular since menarche. Her last period started a few days prior to presentation and was still bleeding when she was seen in office. She normally bleeds for 5 days. She had no evidence of pallor or jaundice and had no bowel or bladder concerns. Her height was 178 centimeters with a weight of 159.7 kgs and a body mass index of 50.4. Pelvic examination revealed a normal vulvar and vagina. Her cervix was non-tender, anterior, firm in consistency and closed, while her uterus was difficult to identify because of her body habitus and some pelvic tenderness. At this point she was diagnosed with pelvic pain of an unknown etiology.

Due to her non-responsiveness and the large size of these masses, her informed consent was obtained for laparoscopy/laparotomy to remove her endometriomas after all options were discussed with her. Possible complications such as trauma to the bowel, blood vessels and other adjacent organs were discussed with her, and she was listed as an urgent case due to her severe pain.

Laparoscopic left ovarian cystectomy and excision of endometrioma was performed. She was placed in the dorsal lithotomy position. The perineum and abdomen were prepped and draped in the standard manner. A size 16 Foley urethral catheter was inserted for free bladder drainage. A small longitudinal incision in the infraumbilical region for Verres needle insertion was performed. An attempt to introduce the Veress needle was unsuccessful because of the size of the mass. An attempt at a Palmar's point entry was unsuccessful. We then decided to enter the abdomen with a 12 mm trocar under direct visualization. On entering the abdomen, we entered the endometrioma and immediately drained 3 liters of chocolate fluid before having good visualization.

We were then able to insert our remaining trocars- one 5 mm and one 12 mm in the left lateral abdomen and a 5 mm in the right lateral abdomen. We were then able to visualize the large endometrioma. We then opened the endometrial sac and excised the majority of the cyst wall. We inspected the right ovary, however there was no endometrioma visualized in contrast to what was reported by ultrasonography. The uterus was quite adherent with endometriosis and we could not delineate the pouch of Douglas. The bowels were inspected, with no obvious trauma and the abdomen was desufflated of carbon dioxide. The 5 mm trocars were removed and the incisions were closed with 3-0 Monocryl while the 12 mm incision sites were closed with 1-0 vicryl to the fascia and 3-0 monocryl to the skin. The Foley catheter was removed. The final operative procedure was laparoscopic left ovarian cystectomy and excision of endometrioma.

The specimens sent to pathology were an endometrial biopsy and the left ovarian cyst. The endometrial biopsy was benign with no evidence of hyperplasia or malignancy. The cyst was determined to be composed of benign endometrial epithelium with underlying endometrial stroma. Hemosiderin-laden macrophages were identified within the wall is cysts. There was no evidence of dysplasia. The overall appearance is consistent with an endometrioma/endometriosis.

An ultrasound scan was performed which confirmed a large right ovarian endometrioma. A magnetic resonance imaging confirmed a large complex lesion the left ovary measuring 16.8 x 8.1 x 10.8 cm. Imaging characteristics suggesting this may represent an endometrioma (Figure 1).

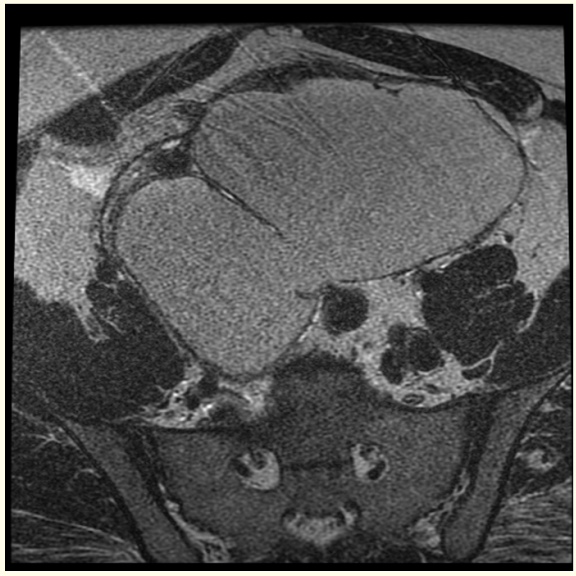

Figure 1: *MRI T2 sequence of left ovarian mass.*

After the laparoscopy, the patient made a good recovery, and was discharged on the same day. She was reviewed after 8 weeks in my office with no complaints.

Discussion

The biggest endometrioma in literature was reported by Ishikawa and Taga from Japan in 1997 [3,4]. This endometrioma was 25 × 18 × 12 cm in size, arising from right ovary and containing approximately 2500 ml of chocolate brown fluid. In our case presentation, the initial ultrasound scan was 18 × 16 × 12 cm in size, arising from the left ovary and containing approximately 3800 ml of chocolate brown fluid, this is greater than any volume published in the literature.

Ultrasonography is the first choice in the diagnosis of adnexal masses and magnetic resonance imaging (MRI) and computed tomography (CT) are the alternative methods. Both CT and MRI are superior to ultrasonography in the assessment of the nature of adnexal masses, with the highest accuracy for MRI [7]. But ultrasonography is the least expensive and easiest method. It is clear from the literature, that there is no method of making definitive diagnosis of adnexal masses.

In our case, ultrasonographic examination showed a thick septate cystic mass which may resemble ovarian cancer. The color doppler evaluation was in normal range. Serum tumor markers were slightly elevated including CA 125 and CA 19-9 (70.4 and 383,1 U/ml, respectively). This was an interesting finding given that increase in CA 125 is usually greater than increase in CA 19-9 in cases with endometrioma [2,9]. In young women in the reproductive period, serum CA 125 values that are typically greater than classic threshold values are not usually indicative of a malignancy [6,9,10].

Laparoscopic resection of endometrioma is performed routinely in patients with pelvic pain and infertility in order to reduce symptoms and restore normal anatomy. We consented her for laparoscopic excision with a possibility of an open procedure in view of the size of the endometrioma as well as her BMI as we felt this would be a reasonable approach. The mass was so large that it almost reached the xiphisternum on palpation and therefore Palmer's point entry was attempted initially. Unfortunately, this was unsuccessful and therefore entry under direct visualization was attempted. We are aware of the potential risk of spillage of tumor in the case these masses were of malignant origin, however we felt the benefit for removal outweighed this risk given the ultrasound and tumor marker findings [5-7].

Fertility issue was discussed with her and she was quite anxious to conceive as soon as possible. She will be referred to our endocrinology, infertility department for assessment of her reproductive capacity with various options to be discussed with her [8,9,12,14].

Conclusion

We presented this case because of its rarity following an extensive literature review. An endometrioma as large as this one has been published before, but this was the largest amount of chocolate fluid that has ever been drained from a cyst. This is the first case ever reported in the literature with a large endometrioma that has ever been removed laparoscopically.

A consistent finding was that endometriosis was associated with a slight increase of ovarian cancer risk, by a factor ranging between 1.3 and 1.9 in terms of OR, SIR, or RR in most studies [6,7]. As evidenced by this case, endometrioma must be kept in mind during the differential diagnosis even in cases with huge adnexal masses [7,10].

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