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Case Report

Abdominal Wall Endometriosis

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Case

A 35 year old women, with no relevant medical history, no previous surgeries, G0P0, that has been under birth control pills (BCP) treatment since she was 16 years old until she had childbearing desire, at the age of 34. She reported perihepatic pain (6 in a numeric rating scale 0-10) during the menses since she had stopped BCP 4 months earlier, and she felt a mass at that level that grew during the menses and disappeared during the rest of the cycle.

She did not have previous surgeries. She did not report pelvic pain symptoms (dismenorrea, dyspareunia, dyschezia or dysuria). There were no pathological findings in the gynaecological examination. In the right upper abdominal quadrant there was a stiffness noticed at abdominal palpation during her menses.

The pelvic MRI (Figure 1) showed retroverted uterus, with a 2, 7 cm subserous myoma on the anterior wall and a fibrous tract on the posterior wall attached to the cervix. The ovaries had no pathological findings.

The abdominal MRI (Figure 2) showed a 6,3x1,5x3,5 cm hemorragic cystic lesions in the right transverse muscle, anterior to the VI liver segment, that captured contrast. There was evidence of adherence of the haemorrhagic cyst to the hepatic capsule.

The patient, under general anesthesia, underwent laparoscopic resection of the

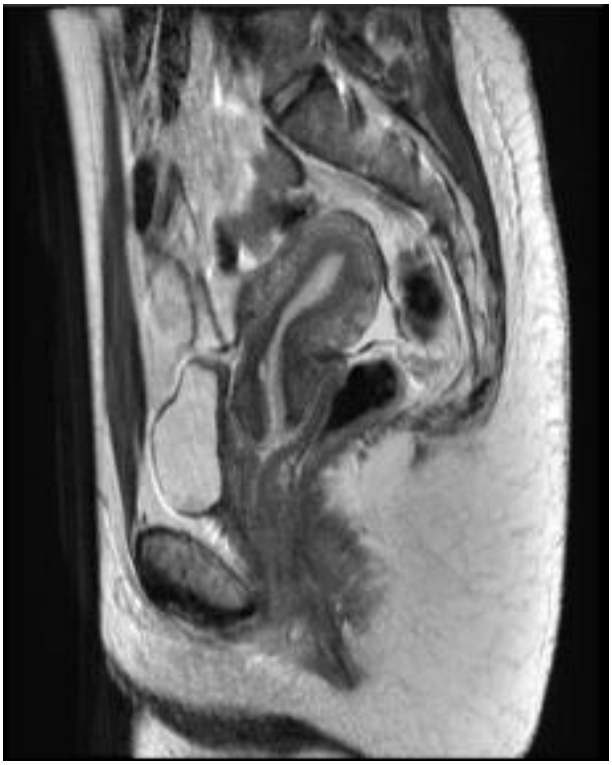

Figure 1: Pelvic MRI with retroverted uterus.

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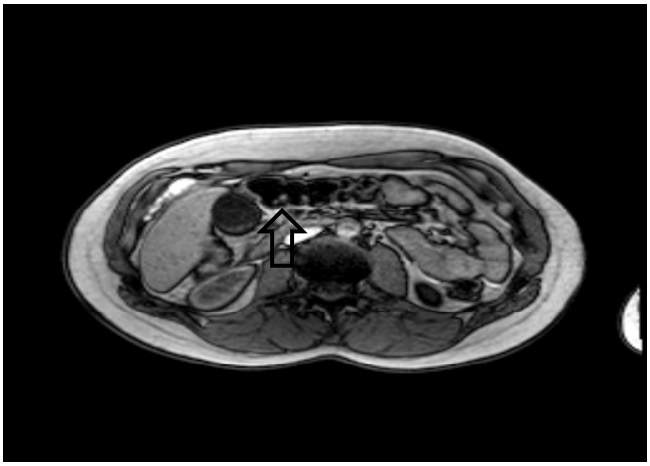

Figure 2: Abdominal MRI.

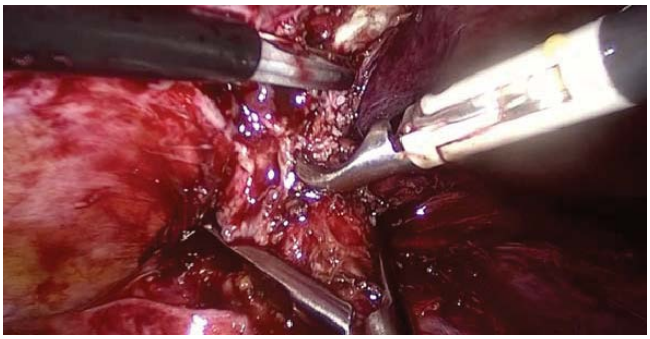

Figure 3: Resection of abdominal endometrioma with endometrial glands.

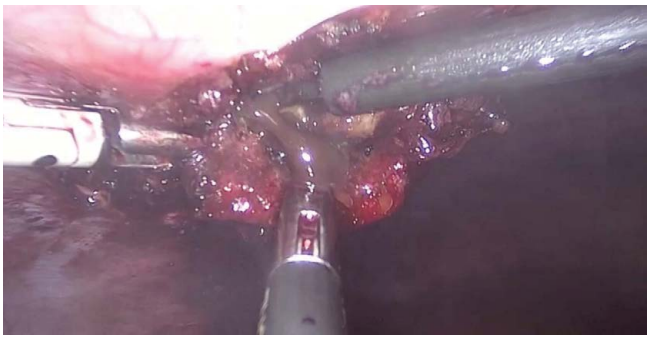

Figure 4: Resection of abdominal endometrioma with chocolate fluid from the endometrioma.

mass (Figures 3 and 4). Adherences to the hepatic capsule were easily removed. It was not necessary to resect the local abdominal wall and the specimen was removed using monopolar hook with complete resection. Superficial foci of endometriosis were seen in the Douglas pouch and were coagulated. The specimen was sent for histological examination, which revealed the presence of endometrioma (multiple endometrial glands with variable focal cystic dilatation, surrounding specialized stroma and dense fibrosis between the endometriotic foci). The patient's postoperative course was uneventful. 4 months after the surgery, the patient was asymptomatic without clinical evidence of abdominal hernia.

Discussion

Endometriosis is defined as uterine mucosa found outside the uterus. Ectopic endometrial tissue usually is located in the pelvis, but can also be found associated with the lungs, bowel, ureter, brain, and abdominal wall. Abdominal wall endometriosis (AWE) is any ectopic endometrium found superficial to the peritoneum and has a reported incidence of 0,03 to 1% after a caesarean section [1,2]. AWE definition includes lesions that are not a result of a previous surgical procedure. Most cases of AWE are secondary to caesarean sections or other surgeries with uterine cavity opening including the rare endometriotic fistula formation after caesarean section [3]. With the increase use of laparoscopy, case reports have surfaced of abdominal wall endometriomas at port sites [4,5]. AWE is considered primary in patients who do not have previous surgeries and is a rare entity. Thus, AWE often is misdiagnosed as a hernia, hematoma, or lipoma and surgical consultation is obtained [6-9].

There are several theories that attempt to explain the pathogenesis of endometriosis. Sampson's theory of implantation, which states that during menses refluxed endometrial cells escape from the fallopian tubes and implant on the surrounding pelvic structures, helps to explain the pathogenesis of AWE. Secondary AWE following caesarean section [10-18] is explained by endometrial cells escape through the incision in the uterus and implant within the abdominal wound. Because it is a rare complication of caesarean section it suggests that hereditary predisposition and biological characteristics of the endometrium may be determinant factors of secondary AWE pathogenesis [19]. However, direct implantation of endometrial tissue cannot explain the pathogenesis of primary AWE. It may form by lymphatic transplantation (Halban's theory of vascular dissemination) or metaplasia of the cells in the abdominal wall into endometrial tissue [20].

The average age of presentation of AWE is 31 years old [1]. Our patient was 35 years-old, had no previous surgeries and was under BCP for several years until the symptoms appeared 4 months after she stopped them for childbearing desire.

The time from the surgery to the onset of symptoms varies considerably and ranges from months to 17,5 years, with an average of 30 months [1,7,9]. The classic symptoms of an abdominal wall endometrioma are cyclic or catamenial pain associated with the mass, but data show that cyclic pain is only present in 57% of the cases [7,15]. Our patient had typical cyclic pain and because of that her diagnosis was suspected 4 months after the beginning of her symptoms. This diagnosis may be more difficult when cyclical pain is not present. The presences of mass (96%) or pain (87%) are the two most common symptoms. Bleeding from superficial lesions and low abdominal pain are other symptoms that might be found.

The differential diagnosis for AWE includes hernia, hematoma, lymphoma, lipoma, lymphadenopaty, abscess, cyst, granuloma, neuroma, soft-tissue sarcoma, desmoid tumor and metastatic cancer.

Physical examination should focus on determining if the patient has a fascia defect and if the mass feels as if it was attached to the anterior fascia [7]. No further studies are usually needed in patients with a classic presentation [6]. Auxiliary diagnostic

modalities might be necessary at times to clarify the diagnosis and make a better plan for surgery [21]. In our patient the symptoms and examination were very suggestive of abdominal endometrioma that were consistent with the abdominal Magnetic Resonance Imaging (MRI).

Fine Needle Aspiration (FNA) is a minimally invasive procedure that can provide a preoperative diagnosis and can be useful in some cases if any doubt. Also it rules out the possibility of malignancy. This is only justified in cases of large masses, doubtful diagnosis and atypical clinical manifestations that was not our patient´s case However, its use is still controversial not only because some studies report it to be inconclusive but also because of risk of new implants at the puncture site [22]. Although the appearance of endometrioma is nonspecific and may change during the course of a menstrual cycle, an ultrasound should be performed preoperatively. Computed tomographic scans and magnetic resonance imaging (MRI) are also useful in ruling out incisional hernias and showing a direct association of the mass and the abdominal wall, in order to plan the surgery [16,17]. Our patient´s MRI was useful to plan the surgery, supporting our previous diagnosis.

J.Horton, et al. [7] found that only 13% of the patients with AWE had a history or subsequent diagnosis of pelvic endometriosis. This percentage is within the range of the overall incidence of pelvic endometriosis in menstruating females, which is 8% to 15% [23]. These data suggest that the incidence of pelvic endometriosis in patients with AWE is within the same range as the general population. In our patient we found superficial implants of endometriosis in the Douglas pouch that were coagulated during the surgery.

Wide local excision with clear margins is the treatment of choice [24]. Surgical excision is recommended to include 5-10mm of surrounding healthy tissue as a surgical margin, although no studies have addressed whether size of surgical margin affects the recurrence rate. Care must be taken not to rupture the mass to avoid reimplantation of microscopic remnants of endometrial tissue [21]. AWE incorporated into the musculature of the abdominal wall requires en bloc resection of the underlying myofascial elements. Surgeons should be prepared for a coexisting hernia and patients should be counselled that mesh repair may be necessary. All biopsy tracts should be excised, in order to avoid new endometrioma implants along the tracts [22,25] even if we are dealing with a benign disease and preservation of musculature should be aimed. J.Horton, et al. [4] review report a recurrence rate of 4,3%. X.Zhao, et al. [20] report that the size and the extent of the mass, especially when it involves muscle or peritoneum, are statistical prognostic factors of recurrence. The larger and deeper the lesion, the more difficult it is to remove it completely. Follow up evaluation is reported inconsistently in the literature. In our patient the mass was 6 cm and had an invasion of transverse musculature. Our laparoscopic resection was considered complete and 4 months after the surgery the patient is without complains and without hormonal therapy.

Medical management of AWE with gossypol or progesterone often results in temporary relief, with extreme adverse effects and return of symptoms after the medication is discontinued [20]. Poor results are reported with danazol [18], tleuprolide [26], and progesterone [11]. There are no data to support postoperative hormonal therapy. However, this may be appropriate in patients with a history consistent with pelvic endometriosis [26,27]. In our patient because of her childbearing desire we were able to diagnose the AWE and she is not suitable to hormonal therapy that was effective in her prior situation.

Summary

We present a clinical case of 35 years-old woman with cyclic upper right quadrant abdominal pain (coinciding with menses) 6 months after stopping her birth control pills. MRI revealed a 6X1, 5X3 cm mass close to liver´s VI segment in the right transverse muscle. Surgery was feasible by laparoscopy with complete resection of the mass. Histological analysis was consistent with abdominal wall endometrioma. Patient is without symptoms 4 months after the surgery. Abdominal wall endometriosis is a rare entity usually secondary to a caesarean section. Surgical treatment is the treatment of choice for these patients.

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