Abdominal wall endometriosis

An overlooked diagnosis

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ABSTRACT

Objective: To study the incidence of abdominal wall endometriosis after cesarean section and its presentation to the general surgeon.

Methods: Fourteen patients were treated for abdominal wall endometriosis during the period June 1997 to May 2002 at Princess Basma Teaching Hospital and King Abdulla University Hospital, Irbid, Jordan. The patient's files were reviewed to see their way and time of presentation after cesarean section, provisional diagnosis made and operative procedures performed. Symptoms suggestive of and investigations carried out to detect pelvic endometriosis were also looked for and recorded.

Results: Fourteen patients were treated within 5 years; all had painful scar-related mass. The pain was exacerbating during menstruation in 5. The clinical diagnosis was stitch granuloma in 3; incisional hernia in 3, abdominal wall tumor in 3 and abdominal wall endometrioma in 5 patients. The mean time for the mass to be noticed by the patient was 2 years. They were treated with wide local excision. Histopathological examination proved the diagnosis of abdominal wall endometriosis. None had evidence of pelvic endometriosis and none of them had recurrence. The incidence of the disease is around 0.2% of the cesarean sections performed during the same period.

Conclusion: The treating physician should keep in mind abdominal wall endometriosis as a possible cause of post cesarean section scar-related masses.

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Endometriosis (EM) is a common disease affecting women in their reproductive years. It occurs when endometrial cells are implanted outside the uterus, commonly in the pelvis.[1] Extrapelvic or extragonadal EM has been encountered and managed in the general surgical practice. Abdominal wall EM, presented as a mass related to previous gynecological operations like cesarean section has a rare incidence as well as different pre-operative diagnoses. In this report we present 14 cases of abdominal wall endometrioma, discussing their presentation and raising this possibility among other wound problems that could be faced by the general surgeon.

Methods. During the period June 1997 till May 2002, 14 females were treated for abdominal wall EM, in the surgical departments of Princess Basma Teaching Hospital and King Abdulla University Hospital, Irbid, Jordan. Patients were between 23 and 45 years of age (mean: 33 years). Their main symptom was a painful nodule related to cesarean section (CS) scar. The pain was described as persistent ache; however, 5 of them had pain exacerbation during menstruation. The nodules were noticed between one and 5 years after CS (mean: 2 years). **Table 1** shows the initial provisional diagnosis of the masses, together with their sizes as well as the time of presentation after CS. Abdominal wall EM was

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suspected as of pain increase at menstruation time. Two of the tumor suspected cases underwent an abdominal computed tomography scan that revealed the localized nature of the mass within the abdominal wall. Fine needle aspiration cytology was carried out in these cases and confirmed the presence of endometrial cells.

Results. All patients underwent operative exploration and were found to have extra peritoneal abdominal wall mass. Excision of the mass was carried out and the abdominal wall defect was closed easily in all except one, who needed enforcement with polypropylene mesh. Histopathological examination was consistent in all of them and confirmed the presence of endometrial tissue surrounded by fibrosis and fatty tissue **(Figure 1)**. They were free of symptoms post operatively and on referral for gynecological workup, none of them had evidence of pelvic EM. None of them also had signs of recurrence. On looking into the records of Princess Badia Hospital, where the main Department of Obstetric and Gynecology is located and serving the area, we found that 6750 CS were performed during the same period, so the incidence of abdominal wall endometrioma is around 0.2%.

Discussion. Endometriosis is a disease that affects women during their childbearing age. It exists in approximately 8-15% of all menstruating women.[2] It is defined as the presence of functional endometrial tissue in anatomical location outside the uterus. Its usual site is the pelvic peritoneum and pelvic organs.[1] Extrapelvic or extragonadal EM is rare and was reported to affect the appendix, small and large bowel, inguinal canal, umbilicus and the abdominal wall as localized disease or as an extension of the pelvic disease.[3,4] Localized abdominal wall EM, often termed endometrioma, results from iatrogenic implantation of endometrial cells in the abdominal wall during a gynecological procedure. The most frequent reported is after CS, in an incidence of 0-0.8%.[3-6] Sporadic cases have also been reported following hysterectomy and hysterotomy[7] and along the tract of laparoscopy trocar,[8] amniocentesis needle[9,11] as well as following ventriculoperitoneal shunt.[11] A scar related endometrioma usually presents as a mass or a nodule related to a gynecological operation. It is noticed usually around one to 3 years after the procedure.[3] However, a case of postmenopausal presentation has been reported 22 years after CS.[12] Although it can be painless, it usually causes pain and discomfort that directs the physician's attention to the differential diagnosis of wound related conditions like inflammatory or stitch granuloma, incisional hernia or even abdominal wall tumor.[13] Pain increase and color changes of the relatively large masses in relation to menstrual cycle will direct the attention to the diagnosis of endometrioma;[3,4] this was noticed in 5 of our patients. On entertaining other causes of the mass; like tumor, ultrasound as well as computerized tomography can confirm the localized nature of the mass and suggest the diagnosis.[14,15]

Table 1 - The initial provisional diagnosis of the masses in relation to their size and time after cesarean section (CS).

Provisional diagnosis	n of cases	range of size in one cm	Time range after CS in years
Stitch granuloma	3	1-2	1-1.5
Endometriosis	5	2-3.5	1-3
Incisional hernia	3	3-5	2-5
Abdominal wall tumor	3	3-8	2-3

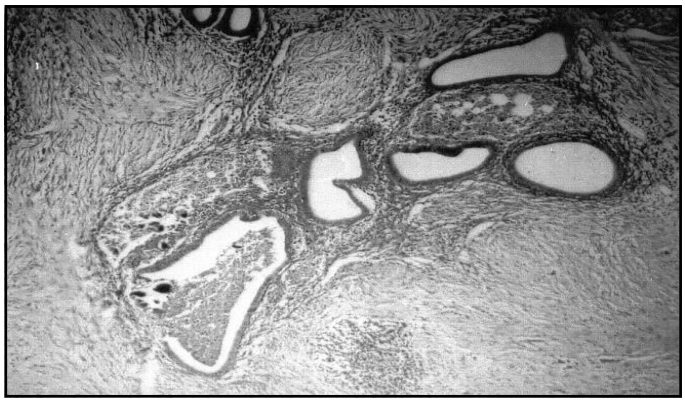

Figure 1 - Islands of endometrial tissue surrounded by the fibromuscular tissue of the abdominal wall. (Hematoxyllin and Eosin 1:100)

Fine needle aspiration cytology yielding endometrial cells will also suggest the pre-operative diagnosis.[16] The final diagnosis is reached on histopathological examination of the excised specimen, which will confirm the benign lesion and exclude malignant changes as this has been reported.[17] The recommended treatment of pelvic endometriosis is hormonal; this controls the symptoms and reduces its progression.[18] For abdominal EM, when diagnosed, hormonal therapy has been reported to control its symptoms of cyclical pain, but could not reduce its size.[19] This, beside the possibility of other causes of the mass, makes surgical excision the treatment of choice.

In conclusion, the incidence of scar related endometrioma in our area of 0.2%, of the CS sections performed, is in accordance with the reported incidence. This somewhat uncommon incidence, confirms the need to keep this diagnosis, along with other possibilities of scar related masses in the mind of the treating clinician.

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