

CASE REPORTS

Endometriosis of the abdominal wall

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Abstract

Endometriosis is characterized by the presence and proliferation of ectopic endometrial tissue. It occurs most often in the pelvic area but sometimes it presents as a lump in the abdomen. We report three cases of endometriosis of the abdominal wall, presented at the Emergency University Hospital of Bucharest during the last year. The diagnosis was made by the histopathological analysis of the surgical specimen.

Keywords: endometriosis, abdominal wall, endometrioma.

Introduction

External endometriosis is defined as the presence of uterine mucosa (glands and stroma) outside the uterus. The most common sites of the endometriosis are the pelvic organs: ovaries, followed by the uterine ligaments, rectovaginal septum, pelvic peritoneum. The sites for extra pelvic endometriosis are bladder, kidney, bowel, omentum, lymph nodes, lungs, pleura, extremities, umbilicus, hernial sacs, and abdominal wall.

Patients and methods

We retrospectively studied three patients who were histologically confirmed endometriosis in the abdominal scar following cesarean section. Those three cases of endometriosis of the abdominal wall were presented in the Emergency University Hospital of Bucharest (one in the gynecology unit and the other two in the surgery unit). All patients were women of reproductive age (34, 38 and 29 years old).

The patients presented to the hospital with various non-specific symptoms including chronic pain in the abdominal area with no relationship to eating nor bowel function, nausea and vomiting. They had firm, irregular masses of various sizes, which were surgically removed. The tissues were routinely fixed in neutral buffered formalin, paraffin-embedded and Hematoxylin–Eosin stained. No special staining was necessary due to the classical aspect of the lesion.

Results

Case 1

Patient was a 34-years-old woman, who presented in the gynecology unit of our hospital. She had had cesarean sections six months before. Symptoms were

not specific. She complained of pain and variations in the size of the abdominal mass related to menstrual periods and exercising. Her menstrual periods were normal. On physical examination, there was a 3/3/2 cm hard mass, immobile, firm on palpation in the surgical scar. There was also hyperemia at the surgical scar level. Due to the presence of recent cesarean scar, there was clinical suspicion of endometrioma in this first case, and the intraoperative frozen section consultation reported the mass to be abdominal wall endometriosis.

Case 2

A 38-years-old woman presented in the surgical unit of our hospital with a firm, tender, painful, subcutaneous mass at the surgical scar level following cesarean section nine months before. The mass was 4/2.5/1 cm. She also described increased tenderness in the mass during menstrual periods. No other symptoms were present. The clinical diagnosis was of suture granuloma.

Case 3

A 29-years-old woman presented in the surgical unit of our hospital with a mass in the lower abdomen of 7/8/4 cm. The mass was firm on palpation, immobile, not reducible. She had had cesarean sections 36 months before. She denied any symptoms. There was no complaint of dysmenorrhea, menstrual periods being regular and normal. She was diagnosed with abdominal mass.

The examination of rest of the abdominal wall and systemic examination of all three patients revealed no modifications. They were treated surgically with radical local excision, and the surgical specimens were sent to pathology. Macroscopically, the resected masses were well circumscribed, tender. Focal areas of slightly firm hemorrhage were present on sectioning of all fragments.

On microscopic view, the features of the three fragments were similar, including foci of endometriosis composed of endometrial glands and stroma, fibrosis, chronic inflammation, and old hemorrhage and the presence of adipose and fibrous tissue. The first case also presented foamy macrophages and neutrophils and diffuse hyperemia, the diagnosis being of infected endometrioma (Figures 1–6).

☒ Discussions

Von Recklinghausen and a year later Villar described one case with umbilical localization, first described cutaneous endometriosis in 1885 [1]. Scar endometriosis is a rare entity, in the literature being described with a frequency of 0.1% in women who have undergone cesarean section [2]. The interval between the surgical procedure and the onset of the symptoms varies between three months and 10 years [3]. Concerning the origin of abdominal wall endometriosis, several theories have been proposed [4, 5]:

- a result of transportation and implantation of the endometrial tissue during surgical procedures with subsequent proliferation of the endometrial cells under estrogenic stimulation;
- the theory of “coelomic metaplasia”, which refers to the involvement of peritoneal cells;
- blood and/or lymphatic spread.

This newly formed ectopic tissue undergoes the same cyclical changes as the normal endometrial tissue, changes induced by the hormonal stimulation.

The mechanism of endometriosis in cesarean scars is related most likely to the surgical procedure. Although one can find endometriosis in laparotomy scars, it is found more often after procedures that involve opening the uterus [6]. The endometrioma is characterized by the presence of elements of the endometrial tissue, glands and stroma. The glands observed microscopically are lined by columnar epithelium. The features of the epithelium vary with the hormonal fluctuations, with the appearance of foci of recent or old hemorrhage and secondary inflammatory response [7].

Symptoms are usually nonspecific, including abdominal pain, nausea, and the presence of an abdominal mass, which may vary in size. All symptoms may sometimes be related to menstrual periods. Some patients rush to the emergency room with severe pain mimicking an acute abdomen, like appendicitis or bowel obstruction. Others may present nonspecific urinary symptoms, which make the clinical diagnosis even more difficult. These nonspecific symptoms are the reason

why most of the cases are admitted into the surgery unit, although this is a disease concerning the gynecologist.

It can mimic other lesions of the abdominal wall, such as suture granulomas, abscesses, hematomas, hernias, incisional hernia, lipomas, sebaceous cysts, desmoid tumor, sarcoma, lymphoma, or primary and metastatic cancer. Complications are rare, although malignant transformation has been reported [8]. Some scar endometriomas may be infected due to late presentation to the doctor, as it happened in our first case. All of our patients were treated with wide surgical excision, which is the treatment of choice for abdominal wall endometriosis and postoperative follow-up revealed no recurrence of endometriosis.

☒ Conclusions

Abdominal wall endometriosis is a rare condition, which can be easily overlooked due to the higher frequency of other type of abdominal masses included in the list of differential diagnosis. One should take into consideration this diagnosis in a woman of reproductive age who presents surgical scars (especially C-sections) or tracts secondary to invasive abdominal-pelvic procedures.

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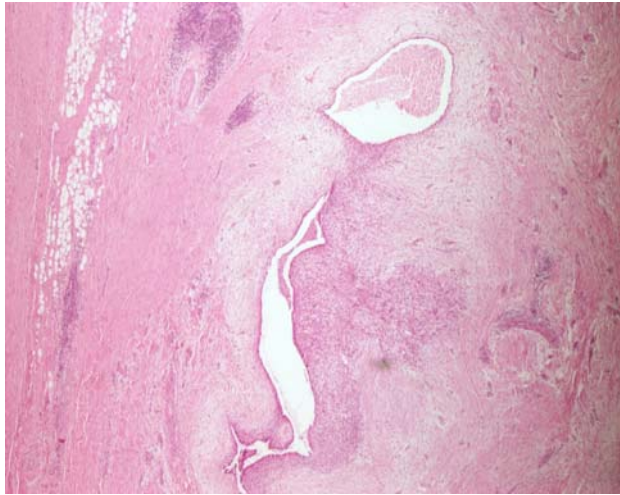


Figure 1 – Endometrial glands and stroma, skeletal muscle fibers and adipose tissue (HE stain, $\times 4$)

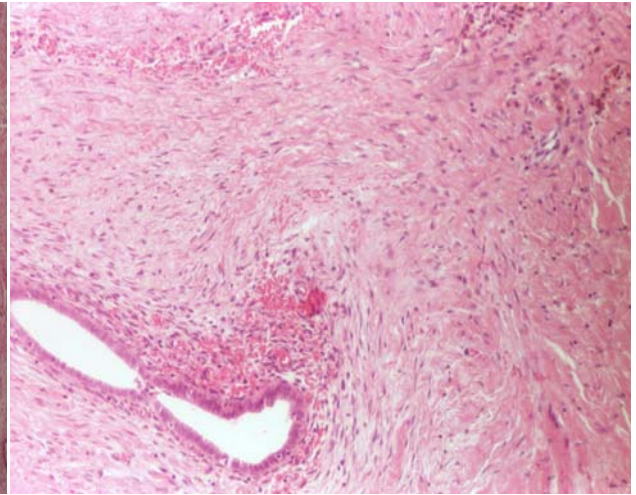


Figure 2 – Foci of recent or old hemorrhage (HE stain, $\times 10$)

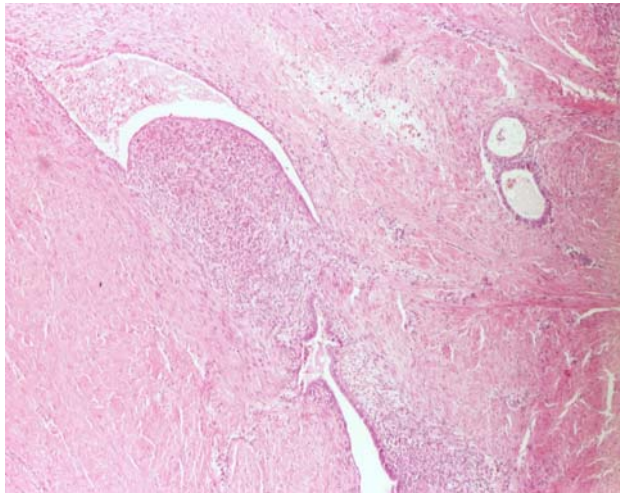


Figure 3 – Endometrial glands and stroma and foamy macrophages (HE stain, $\times 4$)

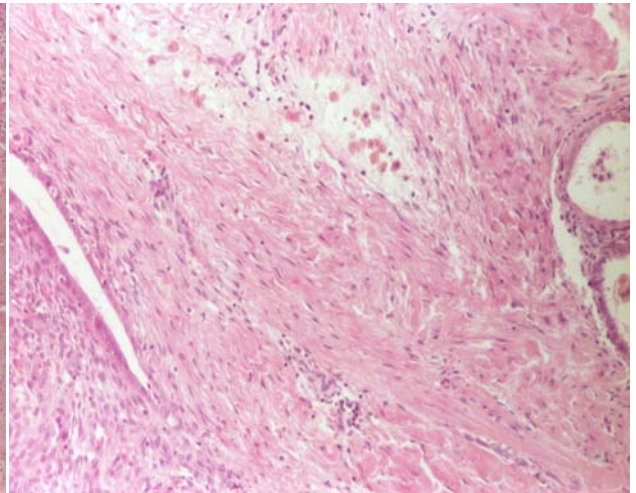


Figure 4 – Endometrial glands and stroma and foamy macrophages (HE stain, $\times 10$)

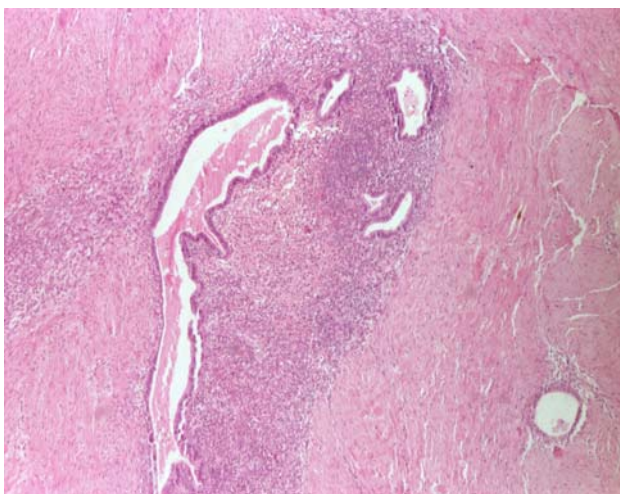


Figure 5 – Inflammatory response with neutrophils (HE stain, $\times 4$)

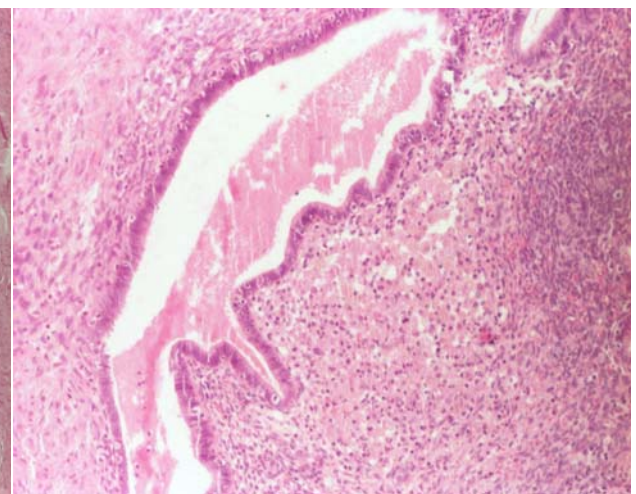


Figure 6 – Inflammatory response with neutrophils (HE stain, $\times 10$)