CASE REPORT

Ectopic Decidual Reaction Mimicking Irritable Bowel Syndrome: A Case Report

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Abstract- Ectopic decidualization with gross involvement of the peritoneum is one of the rare findings in pregnant women particularly when ectopic decidualization disseminated as an asymptomatic intra-abdominal nodule. We present here a case of an ectopic decidualization in a 33-year-old pregnant woman with symptoms of irritable bowel syndrome during pregnancy.

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Introduction

Ectopic decidualization is defined as an extra-uterine decidual change. This phenomenon is commonly seen during cesarean delivery with a reported frequency of 85 up to 100%, however the gross involvement of the peritoneum has a rare frequency (1-5). In non-pregnant women, ectopic decidualization has also been reported as a consequence of progesterone usage (3). The exact source of ectopic decidualization needs to be investigated individually in each case, although two possible etiologies have been suggested. The first mechanism is a progesterone-induced reversible metaplasia of sub-coelomic mesenchymal cells, and the second theory explains the role of decidual cells previously existed in the peritoneum (6).

The appearance of extensive ectopic decidualization resembles metastatic lesions or peritoneal tubercles and the histopathological examination is the only way to establish the diagnosis. We present a case in which the disseminated intra-abdominal ectopic decidualization during pregnancy leads to the development of irritable bowel syndrome (IBS) symptoms.

Case Report

A 33-year-old patient was admitted to prenatal clinic in her first pregnancy at 16 weeks of gestation with a two weeks history of abdominal pain (crampy sensation with variable intensity), nausea, vomiting and diarrhea (frequent loss of watery stools). Her antenatal course until 14 weeks of gestation was unremarkable. She had a history of laparotomy because of acute abdomen related to right ovarian hemorrhagic cyst 5 years before pregnancy. She also had a three years history of infertility and history of laparoscopic adhesions release in process of infertility management. She became pregnant spontaneously six months later. Her past medical history, drug history, and family history were unremarkable. Her physical examination was normal. Routine laboratory tests were within normal ranges. Multiple stool exams were negative for any microorganism.

At the basis of these classic symptoms the diagnosis of IBS was made for the patient and a trial of symptomatic therapy began. She did not show any response to treatment or progression of symptoms after six weeks. The patient was referred to the gastroenterology clinic for further evaluations but she refused more evaluations such as flexible sigmoidoscopy.

Frequent fetal assessments during pregnancy were normal. At the 39th week of the gestation, she underwent elective cesarean section. A male baby weighing 2700 g was delivered with Apgar score 9-10 in the first and 10th minutes. At the time of surgery, multiple yellowish disseminated masses, ranging from 0.4 to 6.0 cm in greatest dimension (Figure 1), involved the *cul-de-sac*,

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ovaries, uterus, pelvic wall, omentum, and the large and small bowel, were observed. Gross inspection of the intra-abdominal appearance suggested the possibility of peritoneal carcinomatosis. Biopsy specimens were taken from the involved sites especially *cul-de-sac*, uterus, pelvic wall and omentum.

Microscopic examination revealed epithelioid cells featuring round nuclei and abundant pink cytoplasm (Figure 2). No evidence of glandular cells was seen. Smooth muscle origin of proliferating cells was ruled out by immunostaining studies for desmin and smooth muscle actin. The diagnosis was compatible with peritoneal deciduosis (ectopic decidual reaction).

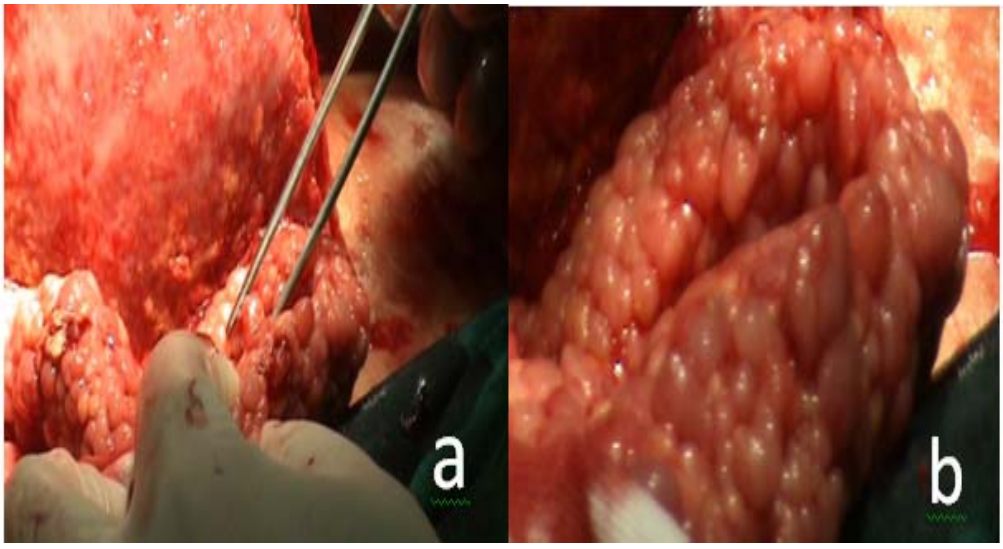

Figure 1. Ectopic decidual reaction presented with multiple yellowish disseminated masses involved the *cul-de-sac* (a), uterus, pelvic wall, omentum, large and small bowel and ovaries (b).

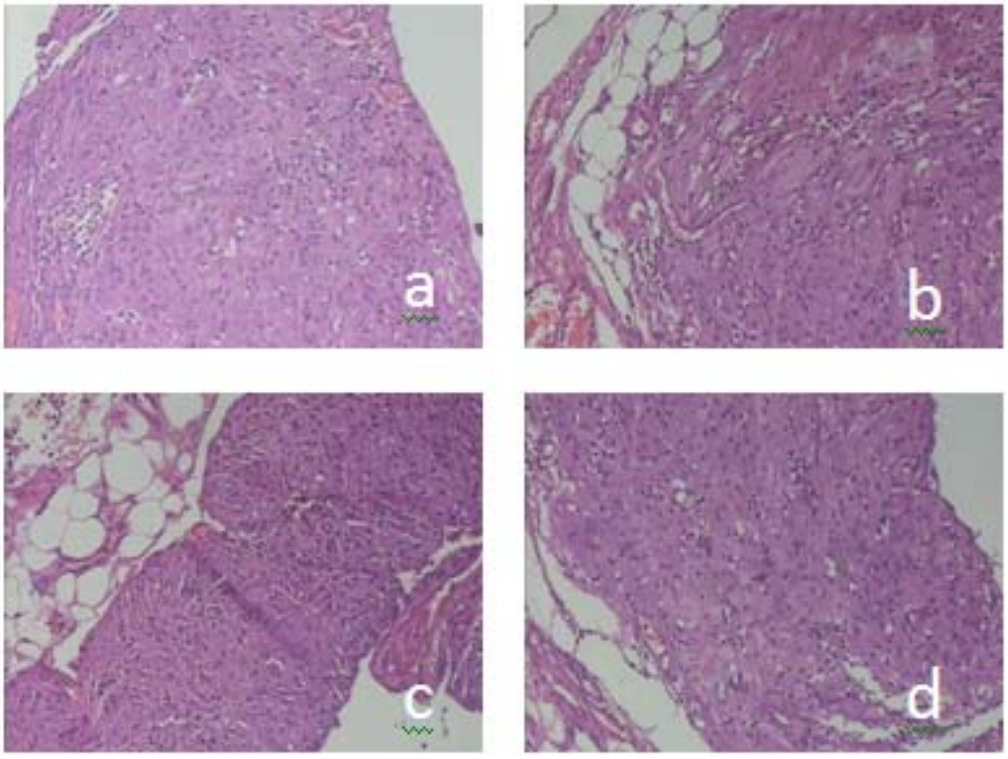

Figure 2. Epithelioid cells featuring round nuclei and abundant pink cytoplasm in histopathological evaluation of patients with ectopic decidual reaction.

The patient was seen on post-operative day 7 and reassured about the results of pathologic study. At her 6 weeks follow up visits, the patient noted resolution of her IBS symptoms. The patient was admitted to gynecologic department 11 months after cesarean section because of secondary dysmenorrhea. She underwent treatment with six-month non-steroidal anti-inflammatory drugs and cyclic low-dose oral contraceptive pills. However this protocol did not relieve her dysmenorrhea pain interfering her daily life's activity. For further evaluation diagnostic laparoscopy was performed. No evidence of endometriosis was identified. Then a *cul-de-sac* biopsy was also performed to exclude microscopic disease. The post-operative course was uneventful and pathology findings were normal. The patient was lost to follow-up after discharging from hospital.

Discussion

After 1887, when Walker *et al*. firstly described the case of ectopic decidua, this condition at ovaries, cervix (7), fallopian tubes (6), peritoneum (8,9), omentum, diaphragm, liver, spleen (1,2,6), appendix (10), pelvic, para-aortic lymph nodes, renal pelvis (11), and lungs (12) was reported in several studies.

The existence of decidualization on the ovaries surface and uterine serosa is a common finding during cesarean delivery; however, extensive nodular decidualization of omentum, *cul-de-sac*, pelvic wall, and the large and small bowel is quite scarce phenomenon.

Patients with ectopic deciduas usually are asymptomatic however rare life threatening events such as abdominal pain mimicking appendicitis (6,10), massive and occasional fatal hemoperitoneum during the last trimester, labor, or postpartum (13), hydronephrosis and hematuria due to renal pelvis involvement (14) and pneumothorax (12) were also documented in the literature.

In our case we have seen resistant IBS symptoms during pregnancy due to disseminated ectopic nodular decidualization.

In spite of dismal macroscopic appearance, these patients do not require further treatment and the lesions and their clinical manifestations spontaneously resolve within 4 to 6 weeks after delivery as well as or case (3).

This report mentions that in patients with unusual gastrointestinal symptoms some uncommon entities such as ectopic decidualization should be included in differential diagnosis. Moreover presence of remarkable medical histories such as ovarian hemorrhagic cyst and infertility after laparoscopic surgery may help physician to further investigation.

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