

Gallbladder endometriosis as a cause of occult bleeding

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Abstract

A 17-year-old girl with colicky abdominal pain and chronic anemia presented to the gastrointestinal service of the University Hospital of Essen. In the routine workup, there were no pathological findings despite the anemia. Because of the fluctuation of symptoms with a climax at the time of menstruation, consecutive ultrasound studies were performed revealing a visible mass inside the gallbladder. This finding was confirmed by a magnetic resonance imaging (MRI) study performed at the same time. Because of the severe anemia by that time, a cholecystectomy was performed, and histology reconfirmed the diagnosis of isolated gallbladder endometriosis. The patient recovered well and has had no recurrence of the disease to date.

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Key words: Gallbladder; Endometriosis; Bleeding; Menstrual cycle; Abdominal pain

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INTRODUCTION

Endometriosis is the presence of functioning endometrial tissue outside the uterine cavity. Indeed, when this hormonally active tissue implants in the gastrointestinal tract, it can cause cyclical bleeding, resulting in anemia and pain. Herein, we describe a very rare case of an endometrial tissue manifestation in the gallbladder.

CASE REPORT

A 17-year-old girl with colicky abdominal pain and chronic anemia of unknown origin was referred to the University Hospital of Essen. The right upper quadrant pain was most severe during menstruation. Similar symptoms had occurred one year prior to admission and led to further hospital stays; however, despite extensive diagnostic efforts, a satisfying diagnosis was lacking and the treatment was for symptoms only. The patient was treated with repetitive iron replacement and blood transfusions, which led to several complications including thrombophlebitis, with the need for surgical intervention. Physical examination revealed no pathological findings apart from a local tenderness to palpation in the right upper quadrant of the abdomen. Routine laboratory studies confirmed a normocytic hypochromic anemia. No further abnormalities were seen in routine laboratory studies; liver function tests were within normal limits, as was hepatitis serology including tests for major hepatotropic viruses.

Several diagnostic means were used to identify the cause of symptoms, including oesophago-gastro-duodenoscopy and colonoscopy as well as radiologic studies. Endoscopic examinations showed physiologic findings in the upper and lower gastrointestinal tract. Radiographic examinations, including barium follow-through, initial ultrasound (US) and magnetic resonance imaging (MRI) of the abdomen, were normal. Computed tomography (CT) of the abdomen showed a questionable radiopaque tissue in the wall of the gallbladder, with concomitant inflammation. These findings, combined with the history of complaints, led to the presumed diagnosis of gallbladder endometriosis. US examination was performed once more on d 14 of the menstrual cycle and repeated every second day, showing continual expansion of the suspected tissue. After 12 d and maximum extension of the tissue, a second MRI of the liver was performed, and the diagnosis of endometriosis of the gallbladder could be confirmed (Figure 1).

According to the radiologic findings and the continued abdominal complaints, laparoscopic cholecystectomy was discussed with the Department of General Surgery and finally performed. The postoperative course was uneventful. Twelve months after surgery the patient was still without any complaints, and during the laboratory follow up her hemoglobin level remained within the normal range; no further transfusions have been necessary. Histopathological examination confirmed the clinical diagnosis of endometriosis of the gallbladder.

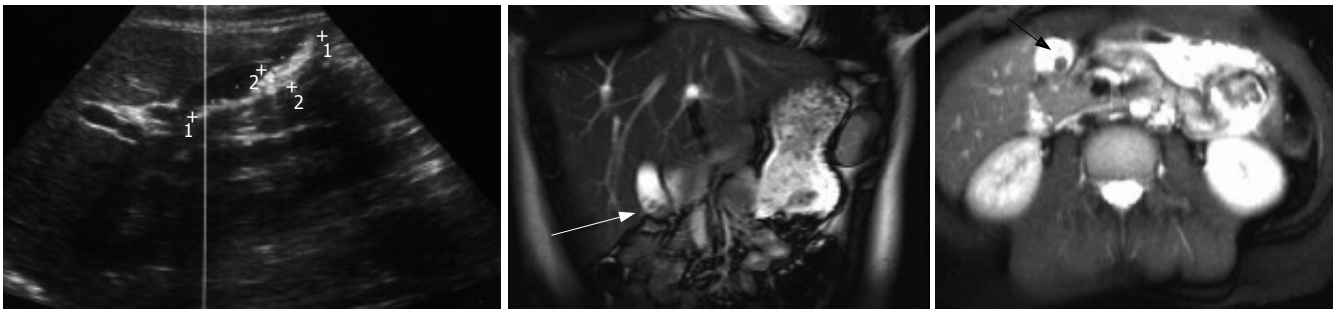


Figure 1 Computed tomography (CT) of the abdomen showed a radiopaque tissue in the wall of the gallbladder, with concomitant inflammation. US examination showed continual expansion of the suspected tissue. After 12 d and maximum extension of the tissue, a second MRI of the liver was performed, and the diagnosis of endometriosis of the gallbladder could be confirmed.

DISCUSSION

Endometriosis, defined as the presence of endometrial tissue outside the uterine cavity and musculature, was first described by von Rokitasky in 1860. Although it usually occurs in the pelvis, endometriosis has been found in almost every region of the human body. As a response to physiologic hormonal changes that occur during the menstrual cycle, this ectopic endometrium will invade, distort and occasionally destroy normal organs. The prevalence of this abnormality has been reported to be between 8% and 18% in young women^[1,2]. The majority of extrauterine endometrial tissue invades ovaries and the pelvic peritoneum. Ectopic endometriosis in other sites of the female body usually involves the gastrointestinal tract, but ectopic tissue may also present within the urinary tract^[1,3,4]. In addition, symptomatic mediastinal, bronchial and pleural endometriosis have been documented^[3,5-8] and the presence of endometrial tissue has been identified in thigh muscle tissue^[9,10], the inguinal canal^[10], nasal mucosa^[11], incisional scars^[12] and, in very few cases, in the gallbladder^[13]. The clinical diagnosis of intestinal endometriosis may be difficult to make because of non-specific symptoms and the missing relationship between symptoms and the menstrual cycle. However, endometriosis should always be considered in women with recurrent abdominal pain and intestinal symptoms, especially in young females with gynaecologic complaints. The high prevalence of irritable bowel syndrome increases the risk of misdiagnosis in these rare cases.

According to its localization, intestinal endometriosis is often an incident finding in laparoscopic procedures^[14-18]. Recognition requires a high index of suspicion. Thus, physicians should be aware of endometriosis as a differential diagnosis in female patients with recurrent periumbilical or abdominal pain and other episodic bowel symptoms.

An important component of the evaluation is a bimanual pelvic examination that includes combined rectovaginal palpitation. Because findings may vary considerably throughout the menstrual cycle, all examinations should be performed immediately before and again after menses^[3,4].

In many cases, radiologic findings are useful in raising the possibility of detection of endometriosis, providing supportive evidence for a preliminary diagnosis^[19-22]. Intestinal endometriosis appears radiographically as a

tapered, often eccentric, constricting deformity. Although CT scanning and US are often unable to differentiate between abscesses and hematomas from endometriotic lesions^[4,18,23], such indirect imaging methods may be useful in defining the anatomic extent of pelvic endometriosis^[4]. MRI is useful for monitoring the response to treatment, but it cannot be relied upon as a diagnostic substitute for laparoscopy^[23-26].

As intestinal endometriosis is usually nonmucosal, enteroscopy is helpful in excluding other gastrointestinal disorders, especially neoplasia^[27,28]. Unequivocal diagnosis relies upon histological confirmation of the presence of the endometrium within one or several organs of the gastrointestinal tract. It is of particular importance in such morphologic interpretations to avoid confusing endometrial tissue with carcinomatous glands. In postmenopausal women in particular, less prominent stromal elements leave scattered endometrial glands, which appear similar to well-differentiated adenocarcinomas. In general, when a diagnosis of intestinal endometriosis is made, hormonal therapy is often the first therapeutic option, similar to the standard approach to pelvic endometriosis^[29-31]. Low-dose estrogen-progesterone compounds can cause pseudopregnancy states that result in the decidualization of endometrial tissue and often relieve symptoms like dysmenorrhea. However, their use in more severe diseases is questionable and generally not recommended for symptomatic intestinal diseases. The most effective agents currently available are the synthetic androgen danazol and the gonadotropin-releasing hormone (GnRH) agonists. New approaches tend to use add-back estrogen replacement to improve the quality of life and reduce the side effects of these treatments^[32]. Although both are effective in decreasing pelvic pain associated with endometriosis and appear to decrease the size of endometrial implants, there are no studies of these agents in intestinal disease, and there is some concern that treatment can result in increased fibrosis^[33]. In cases of mucosal endometriosis, laparoscopic ablation can be accomplished using a carbon dioxide laser^[34,35]. In cases of endometriosis causing partial obstruction of the colon or small intestine, segment resection of the involved area is considered to provide the best results, and it also serves to exclude any underlying carcinoma^[4,36]. In patients who have failed medical therapy and who have intractable symptoms,

hysterectomy and salpingo-oophorectomy can be performed at the time of resective surgery to minimize the risk of symptomatic disease in the future. Similar surgery also can be performed in postmenopausal patients^[37-39].

Because of the isolated endometrial manifestation in the gallbladder and the age of the patient in this case, a surgical approach and laparoscopic cholecystectomy seemed to provide the best results. Considering the long history and suffering of this patient for over one year, it appears that familiarity with this nonneoplastic process and an appropriate index of suspicion is often lacking in physicians - even for patients with typical presentations.

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