Introduction

Endometriosis has been observed in 8 to 15% of the women of reproductive age. Usually it is found in the pelvis (1). It is defined as ectopic growth of endometrial stromal and glandular tissue outside the uterine cavity. The pelvic viscera are most commonly affected, common sites being on or beneath the pelvic peritoneum, the ovaries, uterine ligaments, bladder and bowel. It may also obstruct the ureters or obliterate the cul-de-sac (2). Occasionally it is located outside the pelvis and exceptionally in the upper abdominal cavity and on the diaphragm. We present a case of symptomatic bilateral diaphragmatic endometriosis. It was suspected preoperatively and confirmed by a nuclear magnetic resonance-scan. We discuss the appropriate surgical treatment.

Case report

In September 2002, a 28-year old woman, nullipara, was referred to the emergency ward of our hospital. She suffered from deep extensive pelvic endometriosis since 1997, and had been treated twice by laser laparoscopy in June 1997 and more recently in March 2002, in a tertiary centre by a renowned endoscopic surgeon. Recent surgery was for endometriosis located on the rectosigmoid. On admission, her main complaint was catamenial right hypochondrium and right shoulder-pain. An ultrasound of the abdomen revealed cholecystolithiasis. At laboratory investigation CA-125 was elevated: 46,4 U/ml (normal range 0-35). Nuclear magnetic resonance-scan showed 5 diaphragmatic hot spots, compatible with endometriosis (Fig. 1). We performed an upper abdominal median laparotomy and found 7 lesions on the right diaphragm and 3 on the left. The biggest lesions were transmural and in order to obtain full cure, we had to resect a part of the diaphragm bilaterally, followed by primary closure of the defects. Resected full-thickness diaphragm was estimated on 30 cm² of the right and 20 cm² of the left diaphragm. On the right side, a complete mobilization of the right liverlobe had to be carried out in order to excise the 2 most posteriorly situated lesions. The small lesions were electrocoagulated. The largest 4 lesions were resected. At histopathological examination endometrial glandular and stromal tissue was identified. We concomitantly performed a cholecystectomy. Because of the transmural dissection of the diaphragm, we inserted bilateral thoraxdrains. We also ensured subdiaphragmatic drainage bilaterally. There were no postoperative complications. The patient left the hospital 6 days after the operation in an excellent clinical condition. At postoperative examination, she admitted to be free from the chronic disabling pain.
Extrapelvic endometriosis can occur in up to 12% of the cases (3). Extrapelvic localizations are lesions on organs such as the bowel, omentum, umbilicus, urinary tract, lungs, pleura, extremities and laparotomyscars (1). Diaphragmatic endometriosis has also been reported. It has been associated with recurring catamenial pneumothorax (4). In endometriosis, symptoms are generally related to menstruation. Symptoms caused by diaphragmatic endometriosis are shoulder, epigastric, chest or right upper quadrant pain (5). Our case describes the typical catamenial right shoulder-pain, probably caused by irritating implants on the diaphragm. Diagnosis of diaphragmatic endometriosis can be suspected in a patient with a history of pelvic endometriosis and recurrent catamenial upper abdominal complaints. CA-125 is a reliable parameter in the follow-up of a patient with known deep endometriosis, as described in our case (6). Nuclear magnetic resonance-scan has great potential in establishing the diagnosis of diaphragmatic endometriosis (7). The most effective treatment of endometriosis associated with pain is surgical. Although placebo-controlled studies have reported a significant reduction in pelvic pain and dysmenorrhea in women treated with GnRH-agonists compared to placebo, this medical conservative treatment has been limited by the hypo-oestrogenic side effects and the 5-6% loss in bone density during treatment (8). Moreover, the lesions are only inactivated and not destructed as in the case with both radical and conservative surgery. Adequate therapy should be individualized based on patient age, fertility desires, disease extent and localization (9). The most appropriate surgical approach for diaphragmatic endometriosis is controversial. Laparoscopic treatment, using CO₂ laser vaporization and excision, has been reported with good results, but randomized controlled studies on long-term results are lacking (5, 9, 10). The most recent case reports of diaphragmatic endometriosis favour treatment by laparotomy (11). In our opinion transmural lesions, as in the case presented, are difficult to treat by laparoscopy, with a risk of persistent lesions and recurrence. Further research should focus on the controversy of complete or partial resection.

References