Retroperitoneal abscess and vena cava thrombosis following normal pregnancy and delivery

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Summary: A 24 year old primigravida un'erwent a normal pregnancy and delivery, and developed a retroperitoneal abscess and thrombosis of the vena cava late in the puerperium. A transvaginal drainage of the abscess was performed and the thrombosis of the vena cava treated with Heparin and thrombectomy. Full recovery was obtained.

Key words: Vaginal delivery; Retroperitoneal abscess; Venous thrombosis.

INTRODUCTION

Venous thrombosis in pregnancy and puerperium has a prevalence of 0.2-0.83% ([1–4]). A peritoneal absces is a rare complication to delivery ([5]), but retroperitoneal abscess has only been reported following paracervical or pudendal anesthesia ([6, 7]) or as the first sign of Crohn's disease ([8]).

CASE REPORT

A 24 year old 1-gravida, weight 58 kg, was screened at the 16th week of gestation for coagulopathies, as her mother had suffered from thromboembolic episodes twice during pregnancy.

The thrombocyte count, p-coagulation factors 2, 7, 10, 12, p-fibrin dimers, protein C, antithrombin III, white blood cell count (wbc) and hemoglobin were all within normal range.

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Following delivery, without pudendal anesthesia, a minimal superficial mucosal laceration in the vagina was sutured.

Gynecological examination five days after delivery was normal. On the 16th day post partum the patient was admitted to the rheumatological department because of severe lower back pain and pain in the left leg. On examination a positive Lasegue sign at 30 degrees was noted and pain in the left gluteal muscle was observed. The clinical signs and symptoms suggested lumbar disc prolapse and the patient was treated with analgesics and ultrasound without any improvement in the condition. The patient was bedridden for the next 12 days.

Erythrocyte sedimentation rate (ESR) was 78 mm/h, WBC 16.3×10^{-3}/ml, thrombocytes 391×10^{-6}/ml. Hemoglobin, p-creatinine,p-sodium, s-potassium, s-calcium, s-albumin and coagulation factors 2, 7, 10 were all within normal range.

Four weeks post partum the patient developed a temperature (38.2° C), and severe pain in the left leg. After referral to our department, gynecological and ultrasound examination revealed a large painful mass with low echogenicity behind a normal uterus and a 4.5 cm cystic tumor appeared to be in the right ovary. The left ovary was normal.

To prevent thromboembolic complications treatment with Heparin 5000 IU twice daily was initiated.

Laboratory analysis disclosed ESR 164 mm/h, WBC 24.2×10^{-3}/ml, hemoglobin 6,6 mmol/l and normal values of p-creatinine, s-sodium, s-potassium, coagulation factors 2, 7, 10 and thrombocytes. Haemogas analysis demonstrated a slight respiratory acidosis. The temperature was increased to 39.5° C. Gastrointestinal function was normal with no sign of intraperitoneal infection.

A transvaginal puncture was performed and 500 ml of pus evacuated. Palpation of the abscess cavity proved the retroperitoneal position and a transvaginal drainage tube was placed in the cavity. Daily flushing through the tube was initiated two days later the temperature normalized and the patient's condition improved.

Ten days after the transvaginal puncture, clinical signs of thrombosis in the veins of the left leg developed. Phlebography verified a deep thrombosis from the calf to the inquinal canal including the iliac vein. Ultrasound examination demonstrated that the thrombosis progressed into the vena cava inferior.

The patient was transferred to the department of vascular surgery. High-dose heparin treatment was initiated. Thrombectomy of the vena cava and the iliac vein was performed, and a temporary fistula created between the femoral artery and vein.

During the operation, a right oophorectomy was performed because of the cyst, revealing a dermoid cyst. No sign of recent intraperitoneal abscess was found. Postoperatively Warfarin treatment was initiated and continued for 6 months.

Two months post partum the fistula between the femoral artery and vein was closed surgically. Six months post partum a repeat phlebography was normal.

DISCUSSION

The present case describes a retroperitoneal abscess complicated by thrombosis of the crural, femoral and iliac veins with involvment of the vena cava inferior. The location of the abscess indicated that the probable entrance of the infection was the vaginal laceration, even though hematogenous spreading to the retroperitoneum might have occurred. This is less likely, as no other site of infection was found. No local pathologic vaginal discharge was observed, either on the fifth day during the gynecological examination before leaving the hospital after delivery, or at the gynecological examination three and a half weeks later, when the temperature rise had commenced.

The patient was immobilized for 12 days, suspected of a prolapse of one of the lumbar discs, although she had clinical signs of infection and no abnormal neurological findings.

A peritoneal abscess is a known, but rare complication to even a normal delivery, but it is seldom seen in the retroperitoneal cavity ([6–8]). An earlier diagnosis might have changed the therapeutic strategy and subsequently have prevented the development of the abscess and perhaps have avoided the severe, potentially life-threatening thrombophlebitis.

Because of predisposition to coagulopathie the patient was tested in her pregnancy and the tests were normal. It is known that multiparous women, obese patients and patients with previous thrombo-embolic episodes carry an increased risk of reccurrence during pregnancy and puerperium ([1–4]). As the patient had none of these predisposing factors, she was considered to be a low risk patient. The first two weeks following delivery were unremarkable.

Sixteen days post partum pain in the back and left leg brought her to hospital, where she was immobilized for 12 days. During this period and until the temperature set in, no anticoagulation therapy was initiated, although she was bedridden.

Two days before drainage of the abscess, low dose heparin treatment was initiated. In spite of this, the patient developed severe thrombophlebitis with involvement of the vena cava inferior ten days later. It has been demonstrated that surgical manipulation in the pelvic area, retroperitoneal infections and bedrest en-

hance the risk of thrombo-embolic episodes ([4]).

Whether early high-dose heparin or conventional anticoagulation treatment (following the drainage of the abscess) could have prevented the thrombophlebitis is debatable.

This patient was treated with high dose heparin when the thrombosis in the vena cava was diagnosed, and with surgical thrombectomy and a temparary fistula between the femoral artery and vein. She gained full recovery.

CONCLUSION

From the present case it is concluded that a retroperitoneal abscess should be kept in mind in puerperal patients with low back pain and clinical signs of infection, and that early anticoagulation treatment should be initiated in patients, who are immobilized for any reason.

Thrombectomy and a temporary fistula between the femoral artery and vein performed under cover of anticoagulation therapy is the treatment for thrombosis in the vena cava in order to prevent pulmonary embolism.

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