Case Report

THIRD-TRIMESTR UTERINE RUPTURE FOLLOWING HYSTEROSCOPIC METROPLASTY WITHOUT PERFORATION

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ABSTRACT

We present a case of uterine rupture at the 33th gestational week who underwent a successful uterine septum resection by operative hysteroscopy two years ago. Recently, hysteroscopic septum resection has become the first choice of treatment in septate uteris. Uterine rupture in pregnancy is not an expected complication. We report an unusual case of uterine rupture following an uncomplicated hysteroscopic procedure.

Key Words: Rupture, Hysteroscopy

INTRODUCTION

The estimated frequency of Müllerian duct anomalies in the general population is 0.1-0.5 %. Congenital anomalies of the Müllerian system is estimated to occur in 10-14% of women with preterm fetal wastage and most of these anomalies involve the uterus (1,2). Pregnancy wastage has been associated with disorders of lateral fusion of the uterus.

While operative hysteroscopic procedures are more common, it becomes apparent that the yields of hysteroscopic metroplasty are equal or superior to that of transabdominal approaches. As the number of patients undergoing hysteroscopic metroplasty increases, long-term complications become apparent. Uterine perforation is a rare consequence of hysteroscopy with the incidence of 1.5% in operative hysteroscopic procedures. Although uterine rupture in antenatal period has been reported previously, all of these cases had perforation or myometrial serious damage during operative hysteroscopy. There appears to be no reported case of uterine rupture following operative hysteroscopy without perforation. We report an unusual case of uterine rupture accompanied by placenta increata following hysteroscopic metroplasty without perforation.

CASE REPORT

A 27-year-old woman, gravida 3, para 0 was hospitalized at 33 week of gestation because of sudden lower abdominal pain, accompanied by nausea and vomiting.

She was subjected to hysterosalpingogram and ultrasonography because of two consecutive spontaneous first-trimestr abortions. Hysterosalpingography showed a midline uterine filling defect and a single corpus was determined by ultrasonography. Metroplasty for septate uterus was performed with a loop resectoscope successfully without perforation. A control hysterosalpingogram six weeks later showed a normal uterine cavity with no evidence of septa. The patient conceived one year later. Antenatal pregnancy follow-up studies were normal.

At 33 weeks' of gestation, she complained of sudden lower abdominal pain, accompanied by nausea and vomiting. On admission the vital signs of the patient were stable (pulse 82 beats/minute, blood pressure 100/70 mm Hg, temparature 36.6°C). On examination the abdomen was slightly tender and cervix was closed. A nonstress test was performed and showed a reactive fetal heart rate with a baseline 148 beats/min and no uterine contractions. Ultrasonography revealed normal fetus, normal amniotic fluid and no apparent sign of abrutio placenta. Hemoglobin was 12.1 g/dl, white blood cell count was 18000/mm3. Clotting factors, trombocytes and urinanalysis results were normal.

After several hours, the signs of acute abdomen appeared. Ultrasonography showed free fluid in abdominal cavity. A low-segment cesarean was performed. At laparotomy, a rupture was found on the posterior wall. The perforation line that actively bled into the peritoneal cavity was four centimeters in length. The placenta was separated easily, except the perforation site. The necrotic tissue of rupture site was

excised. The uterus was then repaired in three layers. Pathologic examination confirmed the diagnosis of placenta increata.

The newborn was delivered with an Apgar score of seven at the end of first minute. She was discharged from hospital after a month. The baby is now three months old and doing well.

DISCUSSION

Hassiakos and Zourlas have reviewed the literature concerning transcervical division of uterine septum (3). It is apparent that the results of hysteroscopic metroplasty are excellent in patients complaining of recurrent fetal wastage.

Uterine perforation is a well-known but rare complication of operative hysteroscopy with an incidence of lower than one percent (3, 4). Although rupture of uterus following pregnancy was reported after operative hysteroscopy with perforation, any report of uterine rupture with placenta increata on the fundal end of septa following a hysteroscopic resection without perforation could not be found in the literature. All other cases, reported by different authors were ruptures which occurred at the previous perforation sites (4-6).

In our case, placenta was adhered only in the septal region and in pathologic examination of the specimen, trophoblastic invasion was seen in the middle part of the myometrial layer, but there was not any invasion on the serosa of the ruptured tissue (Fig.1). We think that, the cause of the uterine rupture in this case may be the weakening of the fundus by abnormal plasental insertion and the distention of growing gestation. With the use of a loop resectoscope, thermal injury may cause the weakening of the fundus at septal site. As the number of hysteroscopic procedures increases, the long term effects will be more recognized.

In conclusion, there is an increased risk of abnormal placental insertion and uterine rupture in pregnancies subsequent to hysteroscopic septal resection. It is noteworthy to inform fertile patients, on whom hysteroscopic resection is performed, about this potentially hazardous complications.

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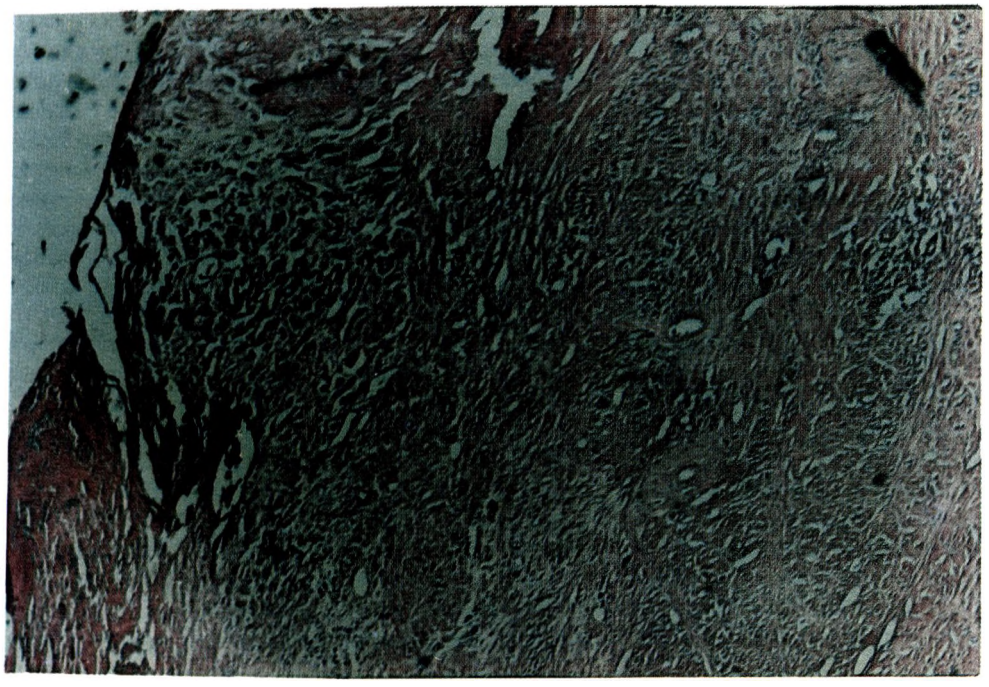

Fig. 1 : Trophoblastic invasion in the middle part of the myometrium.

Erratum to:
Över U, Söyletir G.
Newly Recognized Pathogens In AIDS And Non - AIDS Patients: Cryptosporidium, Cyclospora, Microsporidia. 1998;11(1):47-55.

We are reprinting a paragraph from the above named article as the previous publication lacked the illustration. We regret the error.

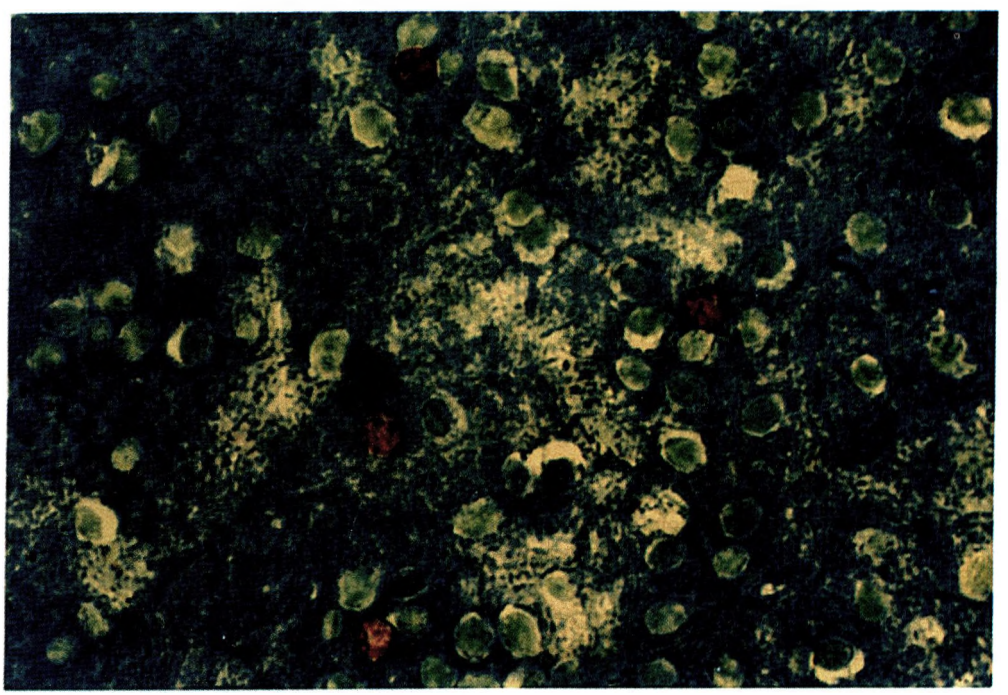

Fig. 1: Cryptosporidium oocysts in stool sample (Modified acid-fast stain)

Diagnosis

Identification of the oocysts in stool samples is still the best diagnostic method for symptomatic patients (1, 2, 4, 7). Three or more specimens are sometimes needed as oocyst secretion varies from day - to - day (1, 2, 22). Stool concentration techniques that are useful for the diagnosis of cryptosporidiosis include flotation of oocysts in Sheather's sugar solution, zinc sulfate or saturated sodiumchloride. The other stool concentration techniques using sedimentation include formalin - ether and formalin - ethyl acetate (2, 3, 7).

Acid - fast staining is the most effective and convenient method for identification of the oocysts. Many other staining methods have been used including fluorescent stains (Fig 1.) (1 - 4, 7). Immunofluorescent staining with a commercial monoclonal antibody is used with good sensitivity and specificity as are EIA kits for the detection of oocysts in the stool (23-26). Specificity has become an important issue in view of recent data indicating that Cyclospora, also acid fast, can be mistaken for Cryptosporidium by the inexperienced microscopist (4,7).

Presently, serologic diagnosis is not helpful but may be useful in detecting those who have had exposure to cryptosporidium and for seroepidemiologic studies (1,2,4,7,27-29).