

## Asymptomatic Uterine Perforation in a Term Pregnancy: A Case Report.

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**Abstract:** Rupture of the gravid uterus is a life threatening obstetric emergency. Rupture of the uterus in a primigravida without any high risk factors is extremely rare. Herewith we are reporting a case of a primigravida with a full term pregnancy with asymptomatic rupture of the uterus, detected incidentally at caesarean section.

**Keywords:** Rupture uterus, unscarred uterus.

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### I. Introduction

Uterine rupture is a catastrophic event during childbirth, and may present with varied signs and symptoms. It is an unexpected, relatively uncommon occurrence in the general obstetric population which must be diagnosed and treated promptly. <sup>(1)</sup>

The incidence of rupture uterus in the general population is 0.3 to 1.7% in women with a history of a scar on the uterus and 0.03 to 0.08% among women with an unscarred uterus. <sup>(2)</sup>

In the WHO Systematic Review of Maternal Mortality and Morbidity, the prevalence of uterine rupture in cases of previous caesarean section was found to be 1%. <sup>(3)</sup>

### II. Case report

A 29 year old primigravida, married for three years, was admitted in Goa Medical College as a referred patient at term, from a private hospital in Goa. She had a history of three years of infertility, having conceived following In Vitro Fertilisation. She had a prior hysteroscopy (done prior to conception) showing the presence of thinned out myometrium near the left cornu.

The patient had no complaints. There was no abdominal pain, nor any bleeding/leaking per vaginum.

The patient's gestational age at admission was 36.4 weeks.

The patient gave a history of polymenorrhea three years prior, for which a pelvic ultrasound was done which revealed an endocervical polyp, for which dilatation and curettage was done in a private hospital in Goa, following which her menstrual cycles were normal.

On examination at admission, her vitals were stable. The uterus was at term, relaxed, with the foetus in cephalic presentation, and with adequate liquor. The foetal heart beat was regular. Per vaginum examination showed that the cervix was long, not closed. Her pelvis was adequate.

All antenatal investigations, including ultrasound were within normal limits.

The patient was admitted and, in view of her previous hysteroscopy findings, a decision was taken for an elective caesarean section.

On the fourth day of admission, the patient went into labour, and was shifted for an emergency caesarean section.

After delivery of the baby which was a healthy female child, weighing 2.44kg, the uterus was exteriorized for examination.

There was a 4cm long rent present near the left cornu, extending on to the fundus involving the left tube, including its lumen, and communicating with the uterine cavity. However, in spite of the rent, there was no active bleeding from its edges.



After closing the lower uterine segment in two layers, the rent was sutured in two layers. The left fallopian tube was ligated using modified Pomeroy's technique. Postoperatively the patient's vitals were stable and the patient had an uneventful post operative stay.

### **III. Discussion:**

The term rupture uterus is used to denote a breach in the substance of the gravid uterus musculature from any cause after fetal viability.<sup>(4)</sup> It constitutes a life threatening obstetric emergency with significant effects on the reproductive function of women.

Uterine rupture typically is classified as either complete when all layers of the uterine wall are separated, or incomplete when the uterine muscle is separated but visceral peritoneum is intact<sup>(5)</sup>.

The majority of cases of uterine rupture occur in a patient where pregnancy follows a previous caesarean section. Direct trauma to the uterus is another rare cause of uterine rupture. The uterine wall may be weakened by previous procedures like manual removal of the placenta or curettage with or without perforation for retained products of conception following abortion.

At present maternal death as a consequence of uterine rupture occurs at a rate of 0-1% in developed nations and 5-10% in developing countries<sup>(6,7)</sup>.

In our case, the previous dilatation and curettage probably led to thinning of the myometrium thereby causing spontaneous rupture<sup>(8)</sup>. Rupture uterus is one of the worst obstetric emergencies in which the life of both mother and child are in danger, the incidence ranges from 0.2-0.6%. Factors that can predispose to uterine rupture are multiparity, advanced maternal age, a scarred uterus, malpresentations, contracted pelvis, misuse of oxytocic drugs, and rarely obstetric manoeuvres like external cephalic or internal podalic version, and following instrumental deliveries<sup>(9)</sup>.

Fetal morbidity invariably occurs because of catastrophic hemorrhage leading to fetal anoxia, with uterine rupture and expulsion of the fetus into the peritoneal cavity. The chance of fetal survival is minimal. Immediate diagnosis and delivery by laparotomy can save the baby<sup>(10)</sup>.

A prospective cross sectional study was conducted in Faridpur Medical College by Mahbuba and IP Alan in 2012. In this study, out of 3606 deliveries over 1 years duration, 16 patients (0.4%) had rupture uterus in a previously unscarred uterus<sup>(10)</sup>.

A similar case of rupture uterus in a primigravida at term who was not in labor was reported by Walsh et al. (2006)<sup>(11)</sup>.

A case of a large uterine defect around 5 cm in a patient at 42 weeks of gestation detected when the patient was taken for caesarean section in view of an unsuccessful attempt at labour has been reported at Enloe Medical Center, Chico, California. The patient had undergone dilatation and curettage for a late first trimester fetal death<sup>(12)</sup>.

#### **IV. Conclusion**

We report this case to highlight the fact that although spontaneous rupture of the gravid uterus is a very rare complication in primigravid women, it can still occur and it should be diagnosed and treated promptly. Patients with a prior dilataion and curettage, and other uterine interventions should be monitored and screened for myometrial thickness prior to conception and antenatally by ultrasound and MRI.

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