

## The changing causes of uterine rupture in a tertiary obstetric center

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### Objective

With fewer options and cautious peripartum assessment for trial of labor (VBAC), decreased uterine rupture through a prior cesarean scar was reported. However, risks for uterine rupture include other previous operations that traumatize the myometrium have been increasing; making the etiologies changed remarkably in the past decade. The present study investigated the incidence, causes and outcomes of uterine rupture that have changed in a tertiary obstetric center in recent decade.

### Methods

A retrospective case-control cohort study of 16 patients who had uterine rupture at the delivery room of Chang Gung Memorial Hospital, from January 2006 to December 2014; records were acquired and studied and to compare the results with literature data.

### Results

There were 16 cases of uterine rupture out of 36076 deliveries, giving an incidence of uterine rupture of 4.4 per 10000 during the study period. All the ruptured cases were singleton and were not under VBAC. No improper oxytocin use was found to be related with uterine rupture. Cesarean scar rupture was found in 6 cases (31%) and noncesarean scar rupture was found in 11 cases (69%). Of the noncesarean scar uterine rupture, there were 7 cases of prior uterine operation (5 cases laparoscopy myomyectomy and a case of TCR), 2 cases of abnormal placentation and a case of assisted delivery operation trauma. 8 cases were preterm pregnancies (rupture between 25+4 to 34 week) and 3 cases were laboring cases, all had fetal distress for emergent section, resulting 3 perinatal deaths and a severe neurological deficit infant. No maternal mortality reported, with successful primary uterine repair except for a case had subtotal hysterectomy, and all mothers were discharged within 7 days postpartum.

### Conclusion

A history of previous uterine operative manipulation and operation became the leading cause of uterine rupture, following by previous caesarean sections, abnormal placentation and assisted delivery operations. The associated of uterine operations caused rupture at preterm gestation, worsening upon the impact on fetal outcomes and further challenging obstetric care.