Acute inversion of the uterus at Caesarean section: A case report

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Background

Acute inversion of the uterus through the uterine incision during Caesarean section is a very rare event and the exact incidence is unknown with only ten cases documented in the literature. The management is usually simple and maternal morbidity is low if inversion is recognised and immediate re-inversion is accomplished. Prolonged uterine inversion may cause haemodynamic instability and shock, often disproportionate to the amount of blood loss.

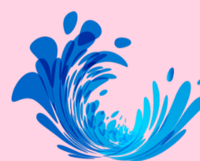
Case Presentation

A 31-year-old, G2P0, Asian woman was booked for elective Caesarean section at 39+3 weeks. Three years earlier she had undergone anal sphincterotomy. Her first pregnancy resulted in an early spontaneous miscarriage when she was abroad for which she did not receive any medical or surgical treatment. Her current pregnancy was complicated with hypothyroidism and gestational diabetes requiring medical treatment with Metformin. A 36 week ultrasound scan showed a normally grown fetus with normal amniotic index and a posterior fundal placenta. Under a spinal anaesthesia, a lower uterine segment was performed, and a healthy male was delivered. Following the bolus intravenous administration of 100 micrograms of carbetocin, uterine contraction was observed and a controlled cord traction was applied to deliver the placenta. With slight traction on the cord, spontaneous inversion of the uterus through the lower segment incision occurred with the placenta remained focally adherent to the uterus. Immediate recognition of the inversion was followed by re-inversion by gently pushing on the uterine fundus from inside the uterine cavity with the placenta still in-situ. The placenta was then removed manually. The area of focal attachment was checked and there was no bleeding. Following closure of the lower uterine segment, the uterine fundus was massaged to make it contract. The remainder of the operation was uncomplicated with uneventful postpartum period.

Discussion:

The exact cause of uterine inversion at Caesarean section is unknown, however, in most of the reported cases inversion of the uterus followed traction on the cord with the placenta either partially or completely attached to the uterus. Some authors associate the inversion to the administration of oxytocin, in particular when given as a bolus, or to an inherent weakness of the uterine musculature. In our case, slight traction on the cord after uterine contraction was followed immediately by complete inversion of the uterus through the uterine incision. The administration of oxytocin or the fundally situated placenta which was focally adherent could have been probable contributing factors in our case. However, no obligate event is related to uterine inversion during caesarean section.

Delay in recognising the inversion may lead to increased oedema of the now heavily contracted uterus making manual correction more difficult. Furthermore, stretching of the peritoneal and broad ligament will lead to neurogenic shock and a vasovagal reaction leading to cardiovascular depression. The obstetrician performing caesarean sections should be aware of this complication.as prompt diagnosis and re-inversion are essential minimising morbidity associated with cases of uterine inversion at caesarean section.



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