Epidural anaesthesia does not mask early signs of uterine rupture

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Introduction

Uterine rupture is a rare, life threatening complication of labour that has an incidence of 0.5% for parturients attempting trial of labour after caesarian section (TOLAC)¹. It requires high index of suspicion in order to diagnose early.

Rupture results in foetal bradycardia and CTG abnormalities, maternal haemorrhage and hypotension, uterine atony, and a change in contractions or pain that does not diminish between contractions.² This change in pain is usually a late sign - potentially due to inability to distinguish it from labour pains.

In our case the pain of rupture was not masked by epidural analgesia, but this was incorrectly assumed to be epidural failure. We suggest that impending scar rupture should always be considered when breakthrough pain occurs despite epidural analgesia.

Epidural analgesia can assist rather than obscure the diagnosis of uterine rupture, could potentially lead to an earlier diagnosis, earlier caesarian section (CS) and result in a reduction in maternal and foetal morbidity and mortality.

Case Report

We present the case of a 31 year old para 1+0 who attended at term for a TOLAC. The patient had a surgical history of emergency CS 3 years previously.

Patient requested epidural while at 3cm cervical dilation. This was sited at L2/3 interspace without immediate complication. A bilateral block to cold at T8 was reached after a test dose of 3ml 0.25% Levobupivacaine and a loading dose of a further 7ml plus 50mcg Fentanyl. An infusion of 0.1% Levobupivacaine + 2mcg/ml fentanyl was started at 10ml/hr as per local guidelines. The patient was noted to be comfortable and relaxed after onset of blockade.

3 hours later the patient was reporting severe abdominal pain despite continued infusion. On assessment she had a block height of T9/T10, was visibly distressed and requiring Entonox constantly. A bolus of 9ml 0.25% Levobupivacaine + 50mcg Fentanyl was given over 5 min to improve the epidural block. Blood pressure remained stable.

25 minutes later a Category-1 CS was called for due to sustained foetal bradycardia. Intra-uterine foetal resuscitation measures were commenced en route to theatre (fluid bolus, left lateral decubitus position and oxygen). On arrival foetal heart rate had improved, and the decision was made to attempt regional anaesthesia. Severe abdominal pain was still described despite recent epidural top-up, therefore epidural was removed and a spinal anaesthetic was sited. 2.3ml Heavy Marcaine + 250 mcg Diamorphine were inserted intrathecally.

8 minutes after spinal, the patient was still reporting severe abdominal pain. Further signs of foetal distress were noted and due to the increased urgency of delivery a failed spinal was declared and general anaesthesia was induced.

On opening the abdomen it was noted that uterine rupture had occurred. The foetus was delivered without incident (Apgar scores 6/9 at 1/5 minutes respectively) and surgery was completed with an estimated blood loss of 1200ml. The patient emerged from anaesthesia without incident and was comfortable post operatively in recovery.

Discussion

In this case the first sign of uterine rupture was severe abdominal pain despite a working epidural. Foetal distress occurred secondary to this.

We therefore highlight that there should be a high index of suspicion of uterine rupture when breakthrough pain occurs despite a functioning epidural.

References

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2. Zakowski M, Dailey P, Jackson S. Managing the risk of uterine rupture during a trial of labor after cesarean section. CSA Bull. 2011;61 (1):66-76.