RISK CASE STUDY

Case: Post-Epidural Placental Abruption

Abstract:

Abnormal fetal heart rate (FHR) pattern was identified shortly after an epidural. Expert reviewers were critical of the fetal monitoring and communication practices.

Key Words:

Obstetrics

Acute Care

Interprofessional Communication

Monitoring

Patient Deterioration

Epidural

Placental Abruption

Case summary:

A gravida 2 para 1 patient was admitted to a tertiary care facility at 40 weeks gestation. Upon admission, a vaginal exam was performed, with the patient's cervix assessed to be five centimetres dilated and 90 percent effaced. The amniotic membranes were noted to be intact and the FHR was assessed to be within normal parameters, with uterine contractions occurring every 2 to 4 minutes.

One hour later, the patient was reassessed by an on-call obstetrics resident, who assessed the patient to be 7 centimetres dilated and 90 percent effaced. The resident then proceeded to artificially rupture the patient's membranes. Upon rupture of the membranes, the amniotic fluid was noted to be clear.

Two hours later, the patient was assessed to be 10 centimetres dilated. The patient's nurse proceeded to assist the patient to push with contractions. As the patient laboured, the FHR was noted to be 80 to 90 beats per minute. The nurse subsequently re-positioned the patient and paged the on-call obstetrician to assess. Following the assessment of the attending obstetrician, the FHR was assessed at 145 beats per minute. The patient continued to push with contractions.

Another two hours later, the nurse paged the on-call obstetrician to re-assess. During the course of the physician's assessment, an epidural was recommended and an intravenous infusion of normal saline solution was initiated. The epidural insertion was completed 30 minutes later and an external fetal monitor (EFM) was applied.

Ten minutes later, the involved nurse noted late FHR decelerations. The nurse repositioned the patient, applied oxygen via a face mask, and administered a fluid bolus. Another ten minutes later, the nurse paged the attending obstetrician. Upon arrival, the attending obstetrician proceeded to page the on-call respiratory therapist and neonatal intensive care unit team. Two minutes later, the infant was born via a forceps-assisted delivery, following concerns related to a potential placental abruption. At birth, the infant was assessed to have Apgars of 2, 1, and 4 at 1, 5 and 10 minutes respectively. Shortly following delivery, the infant began to demonstrate seizure activity and was subsequently transferred to a regional paediatric facility with a tentative diagnosis of hypoxic ischemic encephalopathy.

Medical legal findings:

Expert review of the case was critical of the care provided. Upon review of the patient's health record, experts felt the involved nurse did not obtain an acceptable recording of the FHR and the contractions following the initiation of the epidural. Furthermore, expert review was critical of the involved nurse's failure to page the attending obstetrician immediately following the observation of the late FHR decelerations.

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Reflections:

Reflecting on your practices, as well as your facility's fetal monitoring and epidural policies, procedures and processes:

1. The patient was initially monitored via intermittent auscultation (IA). Once the epidural was administered, the fetus was monitored via electronic fetal monitor. Reflecting on your local policies, what are the clinical triggers for the use of continuous electronic fetal monitoring? And who is 'authorized' to make the decision as to the type of fetal surveillance?
2. In this case the nurse applied intrauterine resuscitation efforts and waited 10 minutes before notifying the obstetrician in the presence of late FHR decelerations. Reflecting on your local policies, was this decision the right decision?
3. Loss of situation awareness is an underlying theme in many of HIROC's obstetrical claims. Describe the concept of "situational awareness". What are some of the factors impacting situational awareness? What are some of the strategies that can enhance situational awareness at the team and practitioner levels?
4. In response to an obstetrical emergency, the obstetrician paged the on-call respiratory therapist and neonatal intensive care team (i.e. code pink team). Reflecting on your local protocols, who is expected and/or authorized to call a code pink? Does your local culture support all practitioners to call a code pink where indicated?
5. Reflecting on your obstetrics program's emergency response processes, are the roles and responsibilities of the involved team members well defined? What are some of the benefits for performing mock obstetrical emergency skill drills and simulations?
6. Describe some of the benefits of periodic huddles during labour and post-delivery debriefs. Are huddles and debriefs in place in your program? Describe some of the benefits of conducting a debrief following all births versus limited to those with an unexpected outcome.

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