NHS Resolution

Case story
Placental abruption

Part of NHS Resolution's maternity campaign 2022/25
#ImprovingMaternityOutcomes

Advise / Resolve / Learn

Early Notification
Case story guidance

Background

In Advise, resolve and learn Our strategy to 2025, our second strategic priority is to share data and insights as a catalyst for improvement and our third is to collaborate to improve maternity outcomes. Aligned with these aims we have gathered together learning from our Early Notification Scheme and produced a number of case stories to help support learning from harm identified through claims.

These resources

Our case stories are illustrative and based on recurring themes from real life events. These experiences have been highlighted and shared with you, to help identify potential risks in your clinical area, promote learning and prevent fewer incidents like these occurring in the future.

How to use the case stories

There are various ways you may use the case stories, from individual self-directed learning to support continuous professional development to using them in a team environment. The idea is that by learning from the experience of others, maternity unit staff will be able to change their approach to care.

As you read or discuss the examples of incidents that we are sharing we ask you to consider the following:

- Could this happen in my organisation?
- What changes within my organisation or team might I consider after reading the material, including individual practice?
- What information should I share with the team?
- How can I share the learning from this case story?
- Who else needs to know?

Practical applications

1. Consider the key elements of the case story and through reflection apply the learning to influence your practice in the future.
2. Use this case study as a point of discussion at appropriate multi-disciplinary team meetings, safety huddles, and/or human factor's training.
3. Use this case study to create a multi-disciplinary simulation in the clinical area or on mandatory training.
4. Review your claims scorecard to identify whether there are any themes which relate to this case story and identify where improvements could be made.

Case Story

This case story is illustrative based on real events and NHS Resolution is sharing the experience of those involved to help prevent a similar occurrence happening to patients, families and staff. As you read about this incident, please ask yourself:

- Could this happen in my organisation?
- Who could I share this with?
- What can we learn from this?

Topic: Placental abruption

Key points:

- Although there are certain risk factors that increase the chance of a placental abruption occurring, it can happen in any pregnancy.[1]
- Placental abruption often presents with abdominal pain and vaginal bleeding, however 19-35% are 'concealed' with no overt clinical signs.[1 & 2]
- It is recognised that blood loss is often underestimated and that the amount of blood loss seen at the introitus may be misleading.[1]
- When a mother is in labour, a regular risk assessment should be undertaken to determine if any changes to her care pathway are indicated, such as place of birth or type and frequency of monitoring.[3]
- Women with Antepartum Haemorrhage (APH) and signs of associated maternal/fetal compromise should be delivered immediately.[1]
- Caesarean Birth (CS) should be classified based upon their urgency. If there is 'immediate threat to the life of the woman or fetus' a Category 1 CS is recommended with delivery occurring as soon as possible, in most situations within 30 minutes of making the decision.[4]

Maternity Story

A 31-year-old mother in her first pregnancy booked for Midwifery-led care. She underwent routine antenatal care and after an episode of decreased movements in her third trimester underwent an ultrasound scan which showed the baby to be growing within the expected range and no other concerns were noted.

At 39 weeks of gestation the mother contacted her local maternity unit at 19:00 complaining of abdominal pain and strong contractions, wondering if her membranes had ruptured as she was losing bloodstained fluid from the vagina. She was advised

to wear a sanitary pad and to attend immediately, making her own way in for assessment.

The parents arrived at around 19:45 and saw a different midwife to the one they had spoken to on the telephone. The telephone record sheet documented, '*Primiparous,?spontaneous rupture of membranes, ?labour. Booked for birth centre-wants water birth'*. The telephone record sheet did not document the liquor colour reported by the mother. The attending midwife undertook an antenatal assessment but did not ask regarding the colour of liquor. The mother's observations were found to be within the expected ranges and the fetal heart was auscultated as normal at 130bpm. The mother was complaining of abdominal pain occurring four times in every 10 minutes and it was documented the mother's abdomen was soft and not tender on palpation, contracting strongly. The sanitary pad was inspected and appeared to be stained with pinky fluid and a 3cm patch of fresh blood was seen. Vaginal examination at 20:00 revealed the cervix to be 5cm dilated with membranes felt to be intact. There was blood seen on the clinician's glove thought to be related to labour.

The Mother was transferred to the alongside birth centre, assisted into the birth pool and care handed over to another midwife. The mother was contracting regularly using gas and air for pain relief. Maternal pulse continued to be documented at 80 beats per minute and Intermittent Auscultation (IA) was undertaken every 15 minutes with normal values recorded. At 22:30 it was noted that the mother had passed urine, an unspecified quantity of blood and a show. At 23:30 the mother was requesting additional analgesia in the form of an epidural. A vaginal examination was performed at this time and the cervix was found to be 6cm dilated with fresh blood noted on the glove. Arrangements were made to transfer the mother to labour ward for pain relief.

On arrival on labour ward, maternal observations were checked and within the normal range. A cardiotocography (CTG) was commenced at 23:55 which showed reduced variability. Whilst awaiting an anaesthetic review, at 00:15 the baby's heartbeat dropped to 65 beats per minute. The Mother was helped onto her left side and the labour ward coordinator was informed and urgent obstetric review requested. After 4 minutes the baby's heartbeat returned to a baseline of 158 beats per minute. An obstetrician was not immediately available to review the mother and in the meantime a cannula was inserted, and blood samples taken. The obstetrician arrived at 00:25 and a small patch of fresh blood was noted on the sanitary pad. Vaginal examination revealed the cervix to be 6cm dilated, an artificial rupture of membranes (ARM) was performed with fresh blood and liquor seen. The fresh blood loss was not quantified. The CTG continued to demonstrate a baseline of 155 beats per minute with reduced variability and maternal observations within the normal range. After discussion with the parents a decision was made to start intravenous fluids and observe in "*light of the CTG*" and cervical progress. The CTG was not classified.

At 00:50 a small blood clot was noted on the mother's sanitary pad and a further bradycardia occurred down to 88 beats per minute. The Mother was helped again onto her left side and a senior midwife informed the obstetrician. After 4 minutes the baby's heart rate recovered to 170 beats per minute. The obstetrician attended and vaginal examination was unchanged at 6cm, so a decision was made for a '*Caesarean Section'* at 01:05 due to the recurrent bradycardias. The CTG remained unclassified, and the consultant on-call was updated by phone at home.

The Anaesthetist attended and gained consent for spinal anaesthesia at 01:15. At 01:28 the mother arrived in the operating theatre. The CTG was recommenced, and the fetal heart was 165 beats per minute with reduced variability and late decelerations. The maternal heart rate was 90 beats per minute. The spinal was completed 01:45 and Caesarean Section commenced at 02:02. On entering the uterus heavily blood-stained liquor was noted. The baby was born at 02:06 with '*placenta abruption noted, and blood clots seen*'. Decision to delivery time was 61 minutes, 111 minutes after the first bradycardia. The mother had a postpartum haemorrhage of 1.4 litres requiring additional medications.

The baby was blue in colour, floppy and making no respiratory effort and had a heart rate of 70 beats per minute. Resuscitation was commenced and an emergency '2222' call was made to summon senior paediatric staff. The baby required ongoing resuscitation at 10 minutes, including intubation and blood was noted around the baby's vocal cords. Only a venous cord blood sample was obtained with a pH of 6.91 base excess of –17.2mmol/L and lactate of 14 mmol/L. On admission to the Neonatal Unit the baby had poor tone and absent primitive reflexes so therapeutic cooling was undertaken. An MRI performed at day six reported '*appearances consistent with severe hypoxic ischaemic injury'*.

Learning Points

This case highlights the importance of regular risk assessment throughout labour and consideration of whether transfer to obstetric-led care is warranted.

- The mother gave a history of blood-stained fluid loss at home and fresh blood was noted several times during admission including prior to transfer to labour ward. Mothers should be asked about liquor loss, liquor colour and bleeding at every contact and this information should be clearly documented. All bleeding should be quantified and recorded.
- Any fresh red bleeding or blood-stained liquor other than a show, noted on initial assessment of labour or that develops during labour warrants transfer to obstetric-led care and continuous CTG during labour.[3 & 5]
  Bradycardia followed by fresh blood seen on ARM should have alerted the team to a potential diagnosis of abruption and plans should have been made to expedite delivery immediately.[1]

- There were multiple missed opportunities in this case to categorise the CTG. The CTG should be classified at all reviews and escalated or actioned appropriately.
- In the context of a pathological CTG, Category 1 Caesarean Section is indicated with an ideal delivery time of within 30 minutes.[4 & 5]
- When deciding to expedite birth, clearly informing the team of the degree of urgency required is vital.[3] In this case, the term '*Caesarean Section'* was used without categorisation. During the local incident review, it was established that different healthcare professionals within the team had different understandings of the level of concern and urgency of the planned delivery.
- An obstetric review should always include consideration of the maternal observations and abdominal palpation. If this had been completed at 01:05 by the obstetrician with consideration of pain and resting tone between contractions the diagnosis of abruption may have been made and appropriate urgency applied to the delivery.
- The diagnosis of antepartum haemorrhage was not acknowledged despite the blood loss identified throughout labour. The mother was not reassessed in theatre during regional anaesthetic insertion to check for further vaginal bleeding.[1]

Considerations for your hospital

- Do all birth settings in your trust have up to date guidance on the criteria for transfer to obstetric-led care and continuous CTG?
- Does your trust has guidelines on recognition and management of Antepartum Haemorrhage?
- Do you have clear guidance on the categorisation of Caesarean Section and recommended decision to delivery times?
- Do you audit the decision making for Category 1 and 2 Caesarean Sections and the decision to delivery times?

What has happened as a result?

This case story is illustrative. If a similar case were to occur in real life, then it would be referred to NHS Resolution's Early Notification Scheme. NHS Resolution's in-house, specialist teams will review all available information about the care received, to decide whether there is any evidence of substandard care which could potentially result in compensation.

The expertise of NHS Resolution is used to proactively assess the legal risk and provide early support to families where liability is established.

NHS Resolution supports an open, transparent discussion between clinicians and families following adverse events.[6] The scheme is also designed to improve the

experience for NHS staff by time limiting the need for protracted involvement in the legal process and rapidly share learning.

It is very important to note that no amount of money is comparable with the loss of a child or a child living with lifelong neurological injuries. Where poor outcomes occur as a result of deficiencies in care, NHS Resolution aims to resolve all such claims or cases fairly and as quickly as possible.

The current compensation cost to the NHS for a baby who has long term severe brain injury is on average £13.5 million. The human costs to the babies, families and clinical teams involved are immeasurable.

Resources:

1. RCOG. Antepartum Haemorrhage. Green top Guideline No. 63. Nov 2011. Antepartum Haemorrhage (Green-top Guideline No. 63) | RCOG
2. Tikkanen M. Etiology, clinical manifestations, and prediction of placental abruption. Acta Obstet Gynecol Scand 2010;89:732–40
3. National Institute for Health and Care Excellence Guidance: Intrapartum care (nice.org.uk). September 2023
4. National Institute for Health and Care Excellence: Caesarean birth (nice.org.uk). March 2021
5. National Institute for Health and Care Excellence Guidance : Fetal monitoring in labour (nice.org.uk). December 2022.
6. NHS Resolution: Saying Sorry. June 2017.

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