Scottish Parliament Region: North East Scotland

Case 201002913: Tayside NHS Board

Summary of Investigation

Category

Health: Hospital; maternity; diagnosis; in-patient clinical care and treatment

Overview

The complainant, Ms C, raised concerns that she had not received appropriate care and treatment when she attended Ninewells Hospital (the Hospital) for delivery of her first child (Baby A). Complications arose during her labour and a prolapsed cord occurred. Ms C subsequently underwent an emergency caesarean section. Baby A was born suffering from severe brain damage and died nine days later.

Specific complaints and conclusions

The complaints which have been investigated are that:

(a) during Ms C's labour she was not listened to *(upheld);*

(b) clinical staff wrongly asked Ms C to get off the bed to allow them to clean up a gush of amniotic fluid *(upheld);* and

(c) the prolapsed cord could have been diagnosed much quicker *(not upheld).*

Redress and recommendations

The Ombudsman recommends that Tayside NHS Board:	*Completion date*
(i) ensure that measures are taken to feedback the learning from this incident to all midwifery staff, to understand the importance of avoiding similar situations recurring; and	30 November 2011
(ii) issue Ms C with a formal written apology for the failures identified in this report.	30 November 2011

Main Investigation Report

Introduction

1. The complainant, Ms C, contacted my office on 24 November 2010. Ms C stated that during the advanced stages of her labour leading up to the birth of her first baby (Baby A) at Ninewells Hospital (the Hospital) on 18 March 2010, she was asked by a midwife (Midwife 1) to get off the bed to allow a gush of amniotic fluid to be cleaned up. Ms C said that at that time she told Midwife 1 she felt something move down but, despite her expressed anxiety over this, she said her comment was dismissed. Ms C said this resulted in the loss of Baby A's heartbeat trace and the scalp electrode procedure failed twice. As Ms C's labour progressed, the umbilical cord came before Baby A's head (a prolapsed cord). Thereafter, Ms C underwent an emergency caesarean section.

2. Ms C said the prolapsed cord was not noticed straight away. As a result, Baby A was starved of oxygen for a significant amount of time causing severe brain damage, which resulted in her death nine days later. Ms C said she was robbed of the chance to be a mother and this has caused great distress to her and Baby A's father (Mr B). They feel they were not listened to during Ms C's labour and the outcome has destroyed their lives as they try to come to terms with their loss.

3. The complaints from Ms C which I have investigated are that:

(a) during Ms C's labour she was not listened to;

(b) clinical staff wrongly asked Ms C to get off the bed to allow them to clean up a gush of amniotic fluid; and

(c) the prolapsed cord could have been diagnosed much quicker.

Investigation

4. In investigating the complaint my complaints reviewer considered the correspondence supplied by Ms C and Tayside NHS Board (the Board). She also had sight of the Board's complaint investigation, associated documents and Ms C and Baby A's medical records (the Records). The complaints reviewer also sought information and comment from a midwifery adviser, a specialist in maternity and women's health (the Adviser).

5. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. An explanation of the

abbreviations used in this report is contained in Annex 1. A glossary of terms can be found at Annex 2. The relevant legislation, reviewed policies and procedures can be found at Annex 3. Ms C and the Board were given an opportunity to comment on a draft of this report.

(a) During Ms C's labour she was not listened to

6. Ms C stated she was admitted to the Hospital in the early hours of 18 March 2010. She said she was examined and told she was 4/5 centimetres dilated with a bulging amniotic sack. She was advised to go for a walk. Subsequently, Ms C's waters spontaneously ruptured and she was taken to the labour suite. Ms C stated she was then 7 centimetres dilated and losing a lot of amniotic fluid, which was becoming greener with every contraction. Ms C said Midwife 1 told her that this was not unusual.

7. Ms C said a tracing monitor was placed on her abdomen to trace Baby A's heartbeat and, as it was quite loud, Midwife 1 turned the volume down (the cardiotocography (CTG) machine). Midwife 1 then momentarily left the room. At this point Ms C had another contraction and said large amounts of very dark green amniotic fluid soaked the bed and floor. Ms C stated at that time she also felt something move downwards with the force of the amniotic fluid. Mr B went to get Midwife 1. He told Midwife 1 about this occurrence and specifically mentioned about the movement downwards, as did Ms C when Midwife 1 returned to the room (see paragraph 1).

8. According to Ms C, Midwife 1 said 'we will get the mess tidied up and take it from there'. Ms C asked if she should get out of bed or stay in bed and Midwife 1 replied 'if you can get out of the bed it will be easier and quicker'.

9. Ms C got out of bed, however, the trace of Baby A's heartbeat was lost. This went unnoticed as the volume on the monitor had been turned down (see paragraph 7).

10. When Ms C got back into bed Baby A's heartbeat did not pick up and Midwife 1 reassured Ms C that it was because (i) she had been moving about and (ii) contact with the monitor had been lost (see paragraph 9). Midwife 1 decided to put a probe directly on Baby A's head to get a better trace, however, her two attempts were unsuccessful (see paragraph 1). At this point another midwife came into the room (Midwife 2) and she attempted this procedure, however Ms C stated '[Midwife 2] shouted that she could feel cord and all hell

let loose'. Ms C was quickly prepared for an emergency caesarean section and Baby A was born.

11. The Board's Director of Nursing (The Director) outlined the results of their investigation in her letter to Ms C of 23 August 2010. Those who participated in the investigation included the Head of Midwifery, two Consultant Obstetricians (Consultant 1 and Consultant 2) and a Consultant Paediatrician.

12. The Director stated that arrangements had been made for Baby A to be delivered in the labour suite at the Hospital, as it had been noted towards the end of Ms C's pregnancy that she was having a large baby.

13. The Director noted at 04:55 that Ms C's amniotic fluid was meconium-stained and she was transferred from the ward to the labour suite, where continuous monitoring of Baby A's heartbeat was immediately started. The Director stated the tracing of Baby A's heartbeat at that time was reassuring. Furthermore, that when there was a large gush of fluid from around Baby A, Midwife 1 had correctly advised Ms C to get out of bed so that the bed linen could be changed more quickly with less discomfort to Ms C (see paragraph 8). The Director stated that Midwife 1, who did the first vaginal examination after the gush of fluid, did not feel the cord and it seemed likely that what Ms C felt at that time was the head moving down (see paragraph 7).

14. The Head of Midwifery stated that Midwife 1 said she did turn the volume of the CTG machine down so that the noise from the machine did not dominate the room, however, she did not turn the sound off completely. She also stated that Midwife 1 had confirmed that immediately before Ms C got off the bed, the foetal heartbeat was normal. In this regard the Director stated that it is not unusual for the CTG machine to lose contact with the baby's heartbeat when the woman is moving around. She added that loss of contact for a short time when there has been a reassuring trace immediately beforehand is not of major concern and said 'In your case, [Midwife 1] did try to maintain contact by holding the transducer in place and managed to obtain one reading during the time you were off the bed'.

15. The Director stated that Ms C returned to the bed after approximately six minutes and Baby A's heartbeat was noted to be very slow. A foetal scalp electrode was put on to Baby A's head. The Director said 'all this happened over about 4 minutes' and stated that during the vaginal examination to apply

the electrode to the head, it was noted that the umbilical cord had slipped past Baby A's head (the prolapsed cord) and was in the vagina (see paragraph 10).

16. Consultant 1 stated that in his view the prolapsed cord was not predictable and they would never know if a vaginal examination carried out earlier would have detected this. Furthermore, it was not immediately obvious on vaginal examination that the cord had come down and it was only noted when Midwife 2 examined Ms C to apply the electrode to Baby A's head.

17. The Director referred to the results of the Board's incident review. It determined that (i) Ms C's care was provided by experienced midwives throughout and their care planning was appropriate and (ii) that no concerns were identified with any of the decisions made or the way Ms C's care was provided.

18. The Director stated that it was not possible to be absolutely certain about what happened to Baby A just prior to her birth.

19. The Adviser reviewed the case file which included the Records, Ms C's correspondence, the Board's correspondence and their account of Baby A's delivery.

20. She noted from the Records that during her labour, Ms C was advised and assisted to stand out on the floor while the bed was being changed. During this time there was a subsequent loss of contact of the foetal heart via the abdominal transducer and 70 beats per minute (BPM) was recorded when Ms C was back on the bed.

21. The Adviser stated that the advice given to Ms C to stand out of the bed in order to change the linen may well be sound in the interest of convenience, minimal disturbance and personal comfort to her. However, from the Records the Adviser noted these entries:

> '(ii) copious amounts of fresh meconium stained liquor draining per vaginum
> (ii) a large baby (above the 95th centile) at term
> (iii) a high head at term ... 3/5th palpable'

22. The station of the head in the pelvis was noted to 3/5th palpable on abdominal palpation by Midwife 1, the admitting midwife. However, she had not

recorded this station on vaginal examination. It was noted by Midwife 2 to be at spines-2 during her examination to apply a foetal scalp electrode on abdominal examination at admission (see Annex 2 note).

23. The Adviser said that, given the statement made by Ms C that she felt something move downwards, together with the existing knowledge gained from the entries in the Records as outlined above, to have encouraged Ms C to step off the bed and stand on the floor was at this stage 'imprudent'.

24. The Adviser considered that the fundamental issue of this complaint is Ms C's view that her comment 'something moved downwards' was not given sufficient credibility and acted upon in good time by Midwife 1. The Adviser stated Midwife 1 did not recognise the potential importance of Ms C's statement nor did she investigate it immediately and this was an error of judgement on her part. The Adviser concluded that this was evidence Ms C was not listened to during her labour.

(a) Conclusion

25. Ms C felt the concerns she expressed to Midwife 1 (that something had moved downwards at the same time the large amounts of very dark green amniotic fluid soaked the bed and floor) were ignored.

26. The Adviser noted that, alongside Ms C's stated concern, there was additional active knowledge available to Midwife 1 that a large baby was being delivered and a high head position recorded. The Adviser stated that these combined factors should have received careful and cautious consideration and should have been acted on in good time. However, the Adviser stated there is not evidence she had seen which demonstrated Midwife 1 had (i) recognised the potential importance of Ms C's statement and (ii) immediately investigated it given the specific combination of circumstances (see paragraph 21). I share this view. Taking all these factors into account, I uphold Ms C's complaint that she was not listened to during her labour.

(a) Recommendation

27. I recommend that the Board:	*Completion date*
(i) ensure that measures are taken to feedback the learning from this incident to all midwifery staff, to understand the importance of avoiding similar	30 November 2011

situations recurring in the future.

(b) Clinical staff wrongly asked Ms C to get off the bed to allow them to clean up a gush of amniotic fluid

28. In her letter dated 23 August 2010 to Ms C, the Director stated '[Midwife1] correctly advised [Ms C] to get out of bed so that the bed linen could be changed more quickly …' (see paragraph 13). This view was supported within the Board's incident review, which stated no concerns were identified regarding the provision of Ms C's care (see paragraph 17).

29. The Adviser stated that compression of a prolapsed foetal cord by the presenting part (in this case the head) can be exacerbated by adopting a standing position. Since the cord was detected when Ms C got back on to the bed with a foetal bradycardia (low heart beat) of 70 BPM (see paragraph 20), it therefore cannot be ruled out that standing out of bed may have caused further compression and so contributed to or worsened Baby A's condition.

30. According to the Adviser, meconium stained liquor in labour alone does not mean that a baby is suffering from foetal distress. It is thought to be more an indication of the maturation of a more mature baby. For example, a baby at term (fully mature) or post term is more likely to pass meconium into the amniotic fluid in response to the stress of labour. Since it is one sign of possible foetal distress it is good practice to look for other possible indicators and to monitor the foetal heart continuously.

31. The Adviser noted that Baby A was at term and the meconium staining was noted and appropriate monitoring initiated. She also noted intermittent monitoring was changed to continuous, via the abdominal transducer. The more accurate foetal scalp electrode method of monitoring was attempted as soon as a bradycardia was recorded. The Adviser stated that the increasing meconium staining together with the bradycardia was a clear indication of foetal distress.

32. The Adviser considered that once the prolapsed cord was detected, the midwifery and medical team worked effectively together, responded immediately and appropriately to the emergency in keeping with best practice (The Royal College of Obstetricians and Gynaecologist (RCOG) Caesarean Section Guideline April, 2004).

33. The decision to delivery interval was 14 minutes, which is within the RCOG Guideline recommendation of 30 minutes. The Adviser noted it was pointed out in the obstetrical correspondence that had the cord prolapsed at the time of the gush of meconium stained liquor, delivery was achieved within 24 minutes of this event.

34. Although the Adviser acknowledged that the appropriate standard of care was applied in the Caesarean Section emergency, she stated that midwifery care up to that time was not as vigilant or as responsive to Ms C's needs and concerns as it should have been.

35. The Adviser stated that there was an error of judgement made by Midwife 1 regarding advice to step off the bed which may have compounded the cord compression and so contributed to Baby A's worsening condition (see paragraph 29). She stated, 'Midwifery care at this stage was sub-optimal'.

(b) Conclusion

36. Ms C was in the advanced stages of her labour and had sought support and guidance during the delivery of her first baby, Baby A. Immediately following a strong gush of green amniotic fluid Ms C was asked to get off the bed so that it could be changed. The distressing events that followed led Ms C to question the appropriateness of this advice. The Director subsequently stated this advice was correct given the circumstances (see paragraph 28).

37. The Adviser stated that the advice given to Ms C by Midwife 1 to step off the bed was incorrect and could have added to Baby A's worsening condition. She stated that in this regard midwifery care was 'sub-optimal'.

38. I have taken account of these issues and the active knowledge presented in the Records which was relative to this period of Ms C's labour: for example, the large amount of green (meconium) stained liquid expelled; that Baby A was a large baby; combined with Ms C's stated concerns previously outlined in complaint (a). I am also critical that within the incident review it was determined that no concerns were identified with any of the decisions made or the way Ms C's care was provided. Taking all these factors into account, I uphold this complaint.

(b) Recommendation

39. I recommend that the Board:	*Completion date*
(i) ensure that measures are taken to feedback the learning from this incident to all midwifery staff, to understand the importance of avoiding similar situations recurring.	30 November 2011

(c) The prolapsed cord could have been diagnosed much quicker

40. The Adviser defined a prolapsed cord as a descent of the umbilical cord through the cervix alongside or past the presenting part in the presence of ruptured membranes. Polyhydraminous (large amount of amniotic fluid) and an unengaged presenting part (i.e., the head not below the brim of the pelvis) are among a number of risk factors for a prolapsed cord. In general these can predispose to a prolapsed cord by preventing close application of the presenting part to the lower part of the uterus/or pelvic brim.

41. The Adviser stated that a rupture of membranes in such circumstances compounds the risk of a prolapsed cord. In this case Baby A was a large baby, there was a lot of amniotic fluid (although polyhydraminous was not diagnosed) and the head was high at term in early labour (see paragraph 21). The mobility of the head was not noted so, according to the Adviser, it can be presumed the head was engaged (ie below the brim of the pelvis). In this regard the Adviser stated the difficulty in applying the scalp clip suggests it was perhaps poorly applied (see paragraph 10).

42. The Adviser quoted from the RCOG Guideline No 50 as follows:

'(i) Vaginal examination and obstetric intervention in the context of ruptured membranes and a high presenting part carry a risk of upward displacement and cord prolapse.

(ii) Cord should be examined at every vaginal examination in labour after spontaneous rupture of membranes if risk factors are present or if cardiocotographic abnormalities commence soon thereafter.

(iii) Bradycardia or variable foetal heart rate deceleration has been associated with cord prolapse.'

43. The Adviser stated that poor pickup in foetal heart monitoring and the loss of contact using the abdominal transducer were compounded by Ms C moving

out of the bed, standing and then getting back onto the bed, by which time a bradycardia of 70 BPM was recorded (see paragraphs 7 to 10).

44. The Adviser considered the prolapsed cord was unexpected and could not necessarily be predicted. However, she stated there were some concerning factors evidenced (not least the anxiety expressed by Ms C of feeling something moving down). Given these concerning factors, the Adviser stated it would have been good midwifery practice to have heeded these cues and performed a vaginal examination to exclude cord prolapse before changing the bed linen and certainly before asking Ms C to step off the bed (see complaints (a) and (b).

45. The Adviser noted from the Director's letter to Ms C dated 23 August 2010 the statement attributed to the Head of Midwifery that Midwife 1 had reassured herself that the foetal heart was normal before she got Ms C off the bed. The Adviser stated there is no entry to support this statement in the Records (see paragraph 14).

46. Given the difficulties in recognising the cord prolapse, since it was only detected by Midwife 2 at her second attempt to fit the electrode (see paragraph 41), the Adviser considered it speculative whether the prolapsed cord could have been recognised at an earlier examination.

47. The Adviser stated that everything she reviewed and observed from the maternal notes indicate that Baby A's worsening condition was due to a severe hypoxic insult (oxygen starvation to her brain) due to cord compression.

(c) Conclusion

48. I have considered all the evidence outlined above and, where relevant, linked to the evidence presented at complaints (a) and (b). I have taken account of the Adviser's view that the prolapsed cord was an unexpected event which could not necessarily be predicted. I also note that she considered it speculative whether the prolapsed cord could have been recognised at an earlier examination.

49. Relative to this complaint, I have considered the risk factors for a prolapsed cord (see paragraph 40), the compounded risk of a rupture of membranes, the head high at term and the difficulty in applying the scalp clip which the Adviser suggested may have been poorly applied (see paragraph 41).

I have considered all these issues alongside the RCOG Guideline No 50 (see paragraph 42).

50. Given the set of circumstances where Ms C was (i) not listened to (complaint (a)); (ii) told to get out of bed then back onto the bed, with the associated loss of contact with Baby A by the abdominal transducer (complaint (b)); and (iii) the lack of any record of the foetal heart as normal that according to the Director's investigative findings had reassured Midwife 1 before she got Ms C off the bed (see paragraphs 14 and 45), there have been several failings in this case directly connected to this complaint.

51. While I acknowledge the prolapsed cord was an unexpected event and there cannot be absolute certainty that this could have been predicted or recognised earlier (see paragraphs 44 and 46), if the failures I have detailed had not occurred, this may have given Ms C and Baby A a better chance of avoiding the outcome that followed. I consider there was an overall failure by midwifery staff to ensure that Ms C received the correct level of care and treatment which could have been reasonably expected, given the combined set of circumstances she presented at the final stages of her labour. I have taken all these factors into account and, while I do not uphold this complaint, I accept there were omissions and I am critical of these.

General recommendation

52. I recommend that the Board:	*Completion date*
(i) issue Ms C with a formal written apology for the failures identified in this report.	30 November 2011

53. The Ombudsman asks that the Board notify him when the recommendations have been implemented.

Annex 1

Explanation of abbreviations used

Ms C	The complainant
Baby A	Ms C's baby daughter
The Hospital	Ninewells Hospital
Midwife 1	The first midwife to attend to Ms C at the Hospital
Mr B	Baby A's father
The Board	Tayside NHS Board
The Records	Ms C's medical records
The Adviser	The Ombudsman's midwifery adviser, a specialist in midwifery and women's health
CTG	Cardiotocography
Midwife 2	The second midwife to attend to Ms C
The Director	The Director of Nursing
Consultant 1	Consultant obstetrician
Consultant 2	Consultant obstetrician
BMP	Beats Per Minute
RCOG	Royal College of Obstetricians and Gynaecologist

Annex 2

Glossary of terms

Amniotic fluid	The nourishing and protecting liquid contained by the amniotic sac of a pregnant woman
Abdominal palpitation	Feeling with the hands
Bradycardia	Low heart beat
Caesarean section	Delivery of the baby through an abdominal incision
Cardiocotographic	The technical means of recording the foetal heartbeat before birth
CTG Tracing	Electronic foetal monitoring / heartbeat trace
Hypoxic insult	Oxygen starvation to the brain
Meconium stained liquid	Dark green amniotic fluid which is thick and/or may contain lumps
Prolapsed cord	Descent of the umbilical cord through the cervix alongside or past the presenting part in the presence of ruptured membrane
Polyhydraminous	Large amount of amniotic fluid
Ruptured membranes	When the bag of waters (amniotic sac) breaks
Scalp electrode	Used for continuous foetal heart rate monitoring (to deal with bradycardia caused by cord compression)
Transducer	Electrical monitoring/measuring device

Additional explanatory note

Palpable and Spines -2 (see Paragraph 22)

The station of the head describes the position of the head in relation to the distance from the ischial spines which can be palpated deep inside the posterior vagina (approx 8 to 10 centimetres) as a bony protrusion. Numbers range from -3 to +3 and negative numbers indicate that the head is further inside ie above the ischial spines or ‘high’.

Annex 3

List of legislation and policies considered

The Royal College of Obstetricians and Gynaecologist (RCOG) Caesarean Section Guideline (April 2004) Chapters 6, 6.2, p 52

The Royal College of Obstetricians and Gynaecologist (RCOG) Guidelines No 50 (April 2008)

The Royal College of Obstetricians and Gynaecologist – Umbilical Cord Prolapse in Late Pregnancy (2009)