Case No: HQ15C01040

Neutral Citation Number: [2017] EWHC 1913 (QB)

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION

Royal Courts of Justice
Strand, London, WC2A 2LL
01/08/2017

B e f o r e :

MR JUSTICE GILBART

Between:

JRM **(by his father and litigation friend TRM)**	**Claimant**
- and -	
KING'S COLLEGE HOSPITAL FOUNDATION TRUST	**Defendant**

Philip Havers QC (instructed by Leigh Day) for the Claimant
David Evans QC (instructed by Kennedys Law LLP) for the Defendant
Hearing dates: 17-19, 22, 25th May 2017

GILBART J :

Introduction

1. JRM is now 8 years old. He was born at King's College Hospital ("KCH") on 28th February 2009, one of twins. His mother went into labour when the pregnancy had lasted 29 weeks. Sadly, his brother P died a fortnight later. JRM, who was delivered by forceps, suffered serious injury to his spinal cord around the time of his birth.

2. It is agreed that:

    i) he suffered the acute spinal cord injury around the time of his birth;

    ii) it consisted of vascular injury to the spinal cord due to occlusion of a branch of the anterior spinal artery. The two potential causes of that were

        either

        a) traumatic injury causing tearing of the lining of the artery (arterial dissection), and subsequent clot formation within the vessel;

        or

        b) occlusion due to a blood clot or placental emboli travelling from elsewhere and lodging in the arterial lumen.

    iii) if the court accepted that there was excessive force and traction from instrumental delivery, it was agreed that the most likely mechanism of injury is the arterial dissection referred to above. If there was no significant trauma, then an embolic source was more likely.

3. It is further agreed that the injury could have been caused by the first mechanism if, when about to be born, JRM had been in the occipito-lateral ("OL") position when the forceps were used. It could not have been caused had he been in the occipito-anterior ("OA") position. There is no evidence of any other mechanism or events which could have caused traumatic injury otherwise. It is also the case that the second mechanism (i.e. occlusion as described at (b) above) is exceedingly rare.

4. The effect of JRM's injury has been very substantial indeed. He has four limb paralysis, and only has reflex movements in his arms and legs. He has

a tracheotomy and is ventilator dependent. I need say no more about his current condition, because the issues of liability and quantum have been split, and the trial before me related to issues of liability only.

5. The Claimant alleges that there were two breaches of its duty of care by the Defendant:

> i) the clinicians dealing with the mother's care failed to have regard to an elevated CRP (C-Reactive Protein) blood test result, and to her being in pain and producing offensive liquor, and failed to advance the delivery by means of induction, which delay in delivery led to the use of forceps and the consequent injury;
>
> ii) in any event, the obstetrician delivering JRM negligently used the forceps when JRM was in the OL position.

6. The second cause of action is not dependent on the first being established.

7. When the trial started, the parties intended calling no fewer than 10 independent expert witnesses between them, dealing with the timing and conduct of the delivery, but also the issue of the causation of the damage to the spinal cord, which was very much in issue. There was then no unanimity of view between them on the cause of the injury, neither between the experts on the two sides, nor even between the experts to be called by the Defendant. The agreed position set out at [2] above is that agreed between the respective paediatric neurologists, Dr Sunny Philip MBBS MD MRCP MRCPCH (for the Claimant) and Dr Martin Smith MBBS MRCP PhD (for the Defendant). On the fourth day of the trial Mr Evans QC, Counsel for the Defendant, informed the Court that the Defendant accepted that agreed position. Its case was also then put that if the forceps were used when JRM was in the OL position, then it was accepted that it caused the damage, and that the use of the forceps was negligent. The Defendant's case was that JRM was in the OA position. It also denies that the treatment up to that point was negligent. There is a very real dispute on whether it was negligent to have delayed the delivery, although as noted above it is not necessary for the Claimant to succeed that that issue is resolved in his favour.

8. Those concessions were in my view wholly realistic, and reflected a proper assessment of the evidence which would otherwise have been called. As a result, only two experts gave oral evidence (Professor Bennett and Mr Walkinshaw) which I shall deal with in due course.

9. I shall deal with the matters as follows

> a) The treatment pre delivery

b) Conduct of the delivery, including evidence on JRM's condition after delivery;

c) Legal principles

d) Discussion and Conclusions.

(a) Treatment pre delivery

10. The essential issues in this part of the case relate to

i) whether there was any reason to think that the mother was suffering from chorioamnionitis ("CA"), and if so when;

ii) whether an elevated C-Reactive Protein ("CRP") reading, which was found on the morning of 26 February 2009, but not reported to the ward until later that afternoon, would have led to the induction of labour before 28th February;

iii) whether it was proper clinical practice not to induce labour on the day before actual delivery;

iv) whether a pessary, which had been inserted into the mother's cervix as part of a clinical trial, should have been removed on the day before delivery;

v) whether the use of forceps was caused by the delay.

11. I shall start by saying something about CA. It was agreed that it is an inflammation of the foetal membranes caused by a bacterial infection, usually caused by bacteria ascending into the uterus from the vagina. It can cause serious damage to the baby, and sepsis to the mother. The agreed position was that the only effective treatment for CA is delivery. Reference was made before me to "clinical" CA and to "histological" CA. "Clinical" refers to symptoms of CA being exhibited or felt by the patient: typically abdominal pain, pain or tenderness on palpation of the uterus, the discharge of offensive liquor or an elevated temperature. "Histological" refers to CA being shown to exist within a sample of tissue on laboratory examination. As was agreed by Professor Bennett and Mr Walkinshaw, the two distinguished consultant obstetricians called by the Claimant and Defendant respectively, there is no difference between "clinical" CA and "histological" CA, save of course that the former refers to CA being apparent from clinical signs, while the latter refers to CA being apparent from the testing of tissues in the laboratory. In other words, the two different adjectives refer to the two different ways of discovering its presence in the patient. Unsurprisingly, histological tests reveal a greater incidence of CA than clinical signs, for the reason that CA may have set in but not yet caused symptoms, whereas one could not have symptoms attributed to CA if histological examination revealed none. On the other hand, it is not possible to engage in a

histological examination of tissues, placenta etc before delivery has occurred.

12. It is thus unsurprising that clinicians look to other potential indications of the presence of CA. I heard a great deal of evidence about CRP. It is a plasma protein whose level rises in the blood in the event of inflammation. Given the fact that CA is a cause of inflammation, and that there is a substantial risk of CA developing in a case where membranes have ruptured, it is a sensible precaution to keep an eye on levels of CRP in the blood. Although there is debate about the degree of their reliability as an indicator of CA, it was common ground that clinicians take CRP readings to see if there are signs of infection, and that elevated CRP readings in the blood of a mother who has had a pre-term rupture of membranes can be significant. The first issue in the litigation was the significance of an elevated CRP reading, and whether its existence would have required that labour be induced a day earlier than it was. That reading (105.7 NG/DL) was taken on 26th February 2009. It should have been conveyed to the ward but was not. Ms Penna, the Consultant obstetrician with care at that time of the mother, became aware of it on the 27th February 2009. A reading of 105.7 is elevated. No-one at the trial disputed the fact that such a reading is indicative of the presence of inflammation.

13. I shall now set out the evidence relating to the admission of B's mother, and her treatment until the day of delivery.

14. This was the first pregnancy of JRM's mother. She had previously been treated at different hospitals, and at first it had been thought that the twins shared the placenta. Previous tests at the Queen Elizabeth Hospital, Greenwich in January 2009 had revealed that the twins had separate placentas. She was referred to KCH for an anomaly scan. That scan was performed on the 20th January 2009 at KCH. She had a scan which showed that there was a lack of fluid around JRM, meaning that there had been a rupture of his amniotic sac. She was informed that the consultant could see some problems with the other twin P's heart and stomach. She was then transferred to KCH.

15. On 16th February 2009 she attended the Queen Elizabeth Hospital because she was concerned about some spotting. She was not in pain but felt she was passing urine a lot more than usual. She was examined and told that she should go home and attend her appointment the following day at KCH. On 3rd February 2009 an ultrasound examination showed adequate fluid levels around P. On 16th February 2009 she attended again because of some "spotting." She was asked to return in a week for a further scan, and for some steroid injections because she was at risk of going into premature labour.

16. It is also right to note that on 7th January 2009, at Lewisham Hospital, she was asked (and agreed) to take part in a clinical trial, which was considering whether the presence of a pessary could reduce the risk of premature birth occurring. I shall have more to say about the pessary below.

17. On 23rd February 2009 she was admitted to KCH. She was then in week 29 of her pregnancy She says that she had experienced some vaginal bleeding with abdominal pain, which was strong and constant, and of whose presence she informed the doctor.

18. The respective accounts of the mother, father and treating doctors were as follows.

19. The mother said that she had experienced some vaginal bleeding and abdominal pain overnight and raised her concerns with the doctor. She described the pain as strong and constant and felt that everything was not as it should be. The scan showed that there was now a complete lack of amniotic fluid around the claimant JRM, which she was told meant that there was a rupture of the amniotic sac. She was admitted so that she could be monitored and given antibiotics, and also so that she could rest properly. She was told that they were going to see if the fluid built back up again, but she was also told that if it seemed that she was going into labour or developed an infection, they planned to remove the pessary and carry out a proper examination. She was admitted to the labour ward on the afternoon of 23rd February 2009. She said she had abdominal pain which had been constant since the evening before, but she then began experiencing occasional and painful sensations of her abdomen tightening. That was the first time she had experienced this sensation. She said she had also told the nurses that she was feeling wet as though she was discharging fluid. She was reassured that although she was leaking fluid it was not showing any signs of infection

20. During her first night in KCH she experienced more episodes of the tightening, for which she was given painkillers. The fluid also continued to drain, and in her view smelled quite bad. She informed the nurses of this, and said that she could definitely recall the nurses relaying that to the doctor in her presence. She said she did not want to make too much fuss as the ward was very busy, but she did inform every nurse and doctor that came to see her that she was concerned about the fluid. Nobody mentioned the possibility of the pessary being removed, nor that she might have an infection. On the following morning, 24th February 2009, she was examined by the doctor and was told to let the nurses know if the colour or smell of fluid draining from her changed. The plan was to perform another CTG scan to check the babies again. However there were some difficulties in the nurses being able to find both the heartbeats, so the doctor was called that

evening, and who eventually came and carried out an ultrasound scan, which confirmed that both the babies were fine and moving around normally. She said that on the 26thFebruary 2009 she started to experience pain in her lower back, about which she informed the nurses. The mother and father spoke to a paediatrician, who talked them through the problems of babies being born prematurely. They were told that it would be best if the babies could have as long as possible in the womb and that a natural birth would be much better that a caesarean section, as it would be better for the premature lungs of the baby. She said that there was never any conversation with her about being induced.

21. She said that on 26th February 2009 the pain started to increase significantly. Although she had been uncomfortable and experiencing the tightening sensation in her abdomen on the previous days, she said that this was much worse. It was a burning type of pain in her abdomen and stretching around to her back. There was also a sensation of something heavy pushing downwards. Her brother came to visit her and the only way she could talk to him was while walking about as she could not bear to sit or lie down. She said that she told the nurses about this pain and they gave her regular painkillers. The pain was so bad that she found it impossible to rest or sleep so she spent time pacing around the hospital corridors or kneeling down by her bed just to get some relief from the pain. She said that later that day the fluid which was leaking had a pinkish colour. On the following day, 27th February 2009, she said that the pain was constant and that she could not focus on anything else. Although her partner (now husband) sister and brother came in to join her to watch a rugby game that evening on the television, she was not able to see or focus on the screen or to sit or lie down. She was continuing to lose fluid and starting to feel frightened.

22. On 28th February 2009 the pain continued and she tried to walk up and down in front of the nurses' desk in case she collapsed and also so they might see how much pain she was in. She felt she was not being taken seriously by the midwives, who simply gave her more painkillers. They thought that she was overreacting, and as a new mother to be ,did not understand labour. In the early morning she was told that she was experiencing contractions.

23. When she was cross examined Mr Evans QC put the medical notes to her, to which I will refer presently. He suggested to her that she was not in the pain she described. She denied that and maintained that she was. She said she was not confused in her recollection and denied any suggestion that she inserted references to pain as she knew it was a symptom of CA.

24. The father's evidence described what he recalled from his visits to hospital. He said she had told him the staff that she was concerned about some smelly discharge and she updated them about her pain. He said that the painkillers

she was being given did not seem to be strong enough. He did not feel as though her pain was being given the attention it required, and the staff never gave the impression that they were particularly concerned about the pain which had been building considerably. The reminder of his evidence concerns what happens during delivery, to which I shall return in due course

25. Ms Leonie Penna MBBS FRCOG is a consultant obstetrician at KCH and she has been a consultant there since November 2003. She was a consultant at another Trust from May 1997. She said that the mother was admitted on the 23rd February 2009 under the care of another consultant obstetrician via the Harris Birthright Centre, with a history of abdominal pain since 22ndFebruary 2009. She said that the mother was admitted with a suspected rupture of her membranes (i.e. her waters had broken). The note of her admission sets out a plan which reads as follows.

> "Admit
>
> FBC (Full Blood Count), CRP x 2 per week;
>
> CTG;
>
> Erythromycin PO (Orally) 10/7 (That is an antibiotic)
>
> If any signs labour/infection for removal of pessary (As per Harris Birthright instructions);
>
> D/W Ms Jain (Another consultant) – Happy with plan."

26. The scan was carried out on the 23rd February 2009. Those conducting the scan noted that among other matters the mother had reported a small amount of intermittent vaginal loss and abdominal pain overnight.

27. She said that Ms Meekai To, the obstetric consultant who had carried out the scan, considered that the most likely explanation for the findings was the pre-term premature rupture of foetal membranes (PPROM). She said that this was associated with a risk of pre-term labour and CA, which she described as an inflammation of the foetal membranes due to a bacterial infection, and which can be the cause of rupture of the membranes or can develop subsequently. She said that when PROM occurs in the context of polyhydramnios as in this case, the risk of CA is lower, as it is not usually the cause of the membrane rupture, although careful monitoring is still required as it can develop subsequently. Ms Penna said the careful monitoring of CA is still required as it can develop subsequent to PROM. She said that Ms To had recommended admission to hospital with a speculum and high vaginal swab, testing CRP and WCC (white blood cells) twice weekly and a ten day course of the antibiotic Erythromycin. Ms To stated that if there was no evidence of infection and no signs of labour, that the pessary could remain in situ and the mother's condition should be

managed. A review in one week was planned if she remained undelivered. On the 26th February 2009 Ms Penna said that she spoke to the mother and reviewed her medical records, when she noted that her temperature, pulse and blood pressure were within the normal range and the results of the blood tests from the 24th February 2009 showed normal readings including a CRP reading of 5. The plan was to repeat the blood test on Friday 27th February 2009. There was some concern that the mother was draining offensive liquor which could indicate infection but on review by the medical staff the liquor was found not to be offensive. She made this record in the records after reviewing her at 11am on 26thFebruary 2009.

> "Feeling well T=N (normal) no blood yesterday
>
> plan-continue erythromycin
>
> FBC/CRP today (MW informed) MOD (mode of delivery discussion)…
>
> Recommend vaginal delivery with full monitoring. LSCS (caesarean section) if signs of distress in either baby."

28. The blood test was performed at 12:15 hours and there was a note at 14:00 saying that the results were awaited. It is common ground that the CRP test result should have been reported during 26th February. Ms Penna next saw the mother on 27th February 2009 at 9:40am and made the following entries

> "CRP 105.7-from 26th February 2009
>
> WCC 16.03
>
> Key, P UT (uterus) – Normal tender
>
> Plan-continue observation repeat WCC/CRP, needs good quality CTG today any signs clinical infections will need delivery"

29. She said that CRP was an indicator of the risk of infection but was not specific. It would normally be tested two to three times per week. It is used to indicate the risk that infection is developing so that subtle clinical signs do not get ignored. She said that the point of the CRP test is that if it is raised, it raises the index of suspicion in terms of other clinical signs such as increased temperature or abdominal pains. She said that in her view if one was dealing with premature gestation, delivery is not recommended on a test result in the absence of clinical signs of infection. One was treating the whole patient and not an isolated test result in this particular situation. The clinical signs that would indicate infection are maternal pyrexia, persistent maternal or foetal tachycardia or uterine tenderness. She said that it was particularly important in preterm gestations that labour is not induced unless absolutely necessary, as each additional day of prolongation of gestation is

associated with an improvement in perinatal morbidity and mortality. That was particularly so when it was known that the second twin had abnormalities, so the longer the gestation period the better for both babies. In essence, her view was that for every day the pregnancy is prolonged, the better the outcome. She said that in the absence of clinical signs of infection, the stimulation of labour was not indicated during the 26th or 27th of February 2009. Careful vigilance of clinical signs to allow any deterioration to be detected was indicated and this was undertaken.

30. She said that if the CRP reading of 105.7 NG/DL had been noted in the afternoon of 26th February 2009, that should have prompted the midwives to ask for an obstetric review. She was not on duty at the time. She said if she had been the consultant who had been made aware of the raised CRP, it would have caused her concern about the mother. She said that if she had been asked to review the mother with that level of CRP, she would have continued the planned treatment of observation and to be alert for clinical signs of infection. She said that she would not have contemplated delivery at 29 weeks gestation on the result of a raised CRP alone in a mother who was otherwise well. She said that in the context of the mother's general wellbeing when reviewed at 18:00 hours on 27th February 2009, and the fact that she had a pinkish liquor (i.e. non offensive) and a normal temperature of 36.2ºC with no fever or tachycardia, the elevated reading would not have changed her treatment plan for the reason she had already given. She noted that on the 27th February 2009 the obstetric registrar Doctor Hoo had noted her history, had recorded no pain or discomfort, had noted that her temperature was 36.2ºC and that her liquor was pink and the foetal movements were good (written as +++). She said that if she had been informed of these results she would not have considered delivery at this stage.

31. She did not consider that there was any indication to induce labour. She did not consider that the Arrabin pessary, which is made of an inert material, would have increased the risk of infection. The guideline was that in the in absence of infection the pessary should be left in place as removal required a vaginal examination and that should be avoided if possible in the presence of ruptured membranes until the decision to deliver had been made. In a supplementary statement, she said that she had discussed the issue of the removal of the Arrabin pessary after the premature rupture of membranes. She had discussed the matter with Professor Nicolaides in the light of the report from Professor Bennett. Professor Nicolaides was the author of the clinical trial of the pessary. He confirmed that according to the protocol the indications for removal were a gestational age of 37 weeks, or earlier before medically indicated preterm induction of labour, or elective caesarean section or preterm labour not responding to tocolytic therapy. It followed that PPROM was not included in the indication for the removal of the

pessary. She did not consider that the elevated CRP reading was an indication on 26th February 2009 the pessary should be removed. The removal would involve a vaginal examination which could trigger labour or introduce infection. She did not consider that the pessary acted as an obstruction in labour. It is soft and flexible and it is thought to work by altering the angle of the cervix in relation to the corpus of the uterus, thus reducing infection risk, but said it would not be expected to delay cervical dilation once contractions occur. In her view the pessary would not cause any significant compressive force on the foetal head and neck especially compared to that of foetus pressing on a closed cervix to cause cervical dilation.

32. She was cross examined by Mr Havers QC. She regarded CRP as an indicator. She regarded clinical signs as more important than CRP readings. The pyrexia was a more specific sign. She agreed that the greater the CRP reading the greater the suspicion of the presence of CA. She said that if you had a temperature of say 37.3 degrees and a reading of 40 CRP, one could wait. If the CRP reading was higher it would mean you would have to get on with things. She agreed that CRP can show inflammation within the body. It was suggested to her that the notes of 24th February 2009 suggested that the liquor could be offensive. She agreed with that but pointed out that the notes recorded that another consultant Mr Dennes noted on the same day at 14:00 hours that the mother was "draining clear liquor" and that her abdomen was soft. She agreed that on the next day the CRP reading was very high and had risen significantly over a 48 hours period. She agreed that CRP could be raised by inflammatory processes. She said that raised CRP was not a sign of CA, but it was something that raises the threshold for looking at other results such as pyrexia, foetal tachycardia etc, when otherwise one might ignore them. She then agreed and accepted that CRP would be a warning sign if one was dealing with a woman at risk of infection. She also agreed that an elevated CRP reading raised suspicion in terms of other clinical signs such as increased temperature or abdominal pains. She said that she would have made a note if the mother had been in pain. She accepted that the midwife had noted at 18:00 hours that she was "still experiencing lower abdo(minal)/back pain." She denied that it was likely that the mother was suffering pain when she had seen her. She agreed that there was a history of abdominal pain pre admission. She also agreed that the mother had been given pain relief as required. The records showed that she had been given extra analgesia on the 26th February 2009. While the notes showed pain overnight, she had not entered that in her entry on the 26th February 2009 at 9:40 am. She said that she always asked about pain, but she didn't always make a note of positive matters. She said that the mother had a very stable pulse and if that she had had CA it would be abnormal to have a stable pulse.

33. She said it would be completely illogical to remove the pessary, and it would not have increased the risk of infection. She reiterated that the CRP "does not show infection- it is risk of infection." She then reconsidered that answer after I had asked her about it and she accepted that CRP was a sign of infection but said that it was not the be all and end all. She said that the abdominal pain was not specific, and when she saw the mother she had no pain consistent with CA. While she agreed that having two abnormal readings would have made no difference, she agreed that it would have increased vigilance.

34. Both consultant obstetricians called before me were of great distinction. For the claimant, Professor Philip Robert Bennett, B.Sc., M.B. B.Ch., Ph. D, FRCOG is the Professor of Gynaecology and Obstetrics at Imperial College London, and Consultant Obstetrician and Gynaecologist at Imperial College Healthcare Trust. He gave evidence which was in summary that in his opinion the mother was developing CA between 23rd and 26th February 2009, shown by a rise in her white cell count, by the CRP reading, and in her persistent abdominal and back pain. The CRP reading was particularly elevated, indicating significant infection. The pessary acted as an obstruction, causing a compression force along his trunk and into the head. The pessary should have been removed 18 hours earlier. He also considered that the delivery had probably involved the incorrect application of forceps to his head, and more traction than required to deliver a pre term baby.

35. For the Defendant, Mr Stephen Walkinshaw, B.Sc. Hons, MB, ChB, MRCOG, MD, is a retired Consultant Obstetrician. He was also a Consultant in Foetal and Maternal medicine at Liverpool Women's Hospital, and clinical director of the maternity services at Liverpool for a total of 8 years between 1992 and 2002. He has served on many RCOG working parties and other distinguished bodies, and is the author of over 90 papers. He gave evidence which in summary was that he considered that while there was an elevated CRP reading, Ms Penna's approach of not inducing labour on 27th February 2009, but of continuing conservative care and vigilance for signs of infection, was reasonable. In his view one blood test was insufficient to mandate delivery at this gestation. He did not consider that it had been shown that the forceps had been applied to the claimant in the OL position, but accepted that if it were shown, that would have been care of below a reasonable standard. He did not consider that the delivery had caused the spinal damage.

(b) Conduct of the delivery, including evidence on JRM's condition after delivery

36. I turn now to the events preceding and during delivery. There is the following relevant evidence:

i) The evidence of the scans and assessment of the mother performed by Dr Wee-Liak (William) Hoo MBBS DFFP, a senior registrar in Obstetrics and Gynaecology, on the morning of 28th February 2009;

ii) The evidence of the obstetrician who delivered the baby, Dr Ismaiel Mahfouz, MSc, MRCOG, CCT, then a Senior Registrar, and of Dr Hoo, who was present;

iii) The evidence of the mother and father;

iv) The evidence of the bruising of JRM, as shown by

a) the photographs

b) the contemporaneous notes of those caring for the child after birth;

v) The independent expert evidence of Professor Bennett and Mr Walkinshaw, called by the Claimant and Defendant respectively

vi) The evidence on the likelihood of there being an alternative explanation for the injury to the spinal cord.

37. It is important that I look at all matters together. But some evidence may be of particular significance.

38. Dr Hoo described how the mother was admitted to the labour ward after the sudden onset of abdominal pain. He examined her at 5.40 am on 28th February 2009. She was having uterine contractions. A scan showed that one twin (JRM) was lying with his head downwards (cephalic position) whereas the other twin was in a breech position.

39. Dr Mahfouz was summoned and arrived almost immediately. He examined the mother after removal of the pessary, which had prevented examination of the cervix by speculum. She was dilated to 9 centimetres. JRM was in the cephalic position. According to Dr Hoo, it was not possible to say at that stage whether the baby was in the OA (occipital anterior) or the OL (occipital transverse or lateral) positions.

40. The mother was then transferred to the operating theatre. She was examined again in theatre, and found to be fully dilated. According to Dr Mahfouz, he found that the baby was in the OA position. Because he heard foetal heart rate decelerations, he elected to use forceps, and after two gentle pulls delivered the baby at 6.30 am. After it had been brought to the perineum, an episiotomy was performed, and delivery effected. The second baby, which was in a transverse position, was delivered by Dr Mahfouz grasping his feet and performing an internal podalic version and breech extraction.

41. Dr Mahfouz gave evidence that he was sure that the baby JRM was in the OA position. If it had not been so, he said that it would have been easy to

rotate him. He said in oral evidence in chief that he had felt with his hand for the various landmarks on the baby's head- the fontanelles, the position of the ears, and the "sutures." He used them to determine that the baby was in the OA position. I shall refer presently to his evidence about the areas of bruising found after delivery.

42. Many others were present during the procedures in theatre. According to Dr Hoo, as well as the mother, father, himself and Dr Mahfouz, there were present at least two midwives, two neonatologists and two neonatal nurses, an anaesthetist and an anaesthetist's assistant. Dr Hoo was behind Dr Mahfouz to one side, and could not see the delivery directly. His evidence, contained in a statement made on 20th June 2016, stated that "I was standing behind Mr Mahfouz and I recall that he was particularly gentle in his delivery and that the delivery of twin one occurred after two pulls on the forceps." However, his evidence also stated that he had little recollection of the patient, but "some recollection of the delivery." However, as was pointed out to him in cross examination, he had made a statement for the purposes of an internal review, which took place in mid 2009. In that statement, which was described by him as "written after reviewing the case notes and I feel this to be an accurate and complete account of my involvement" there is no mention of there being any number of pulls, nor of the force (or lack of it) which was used.

43. None of the other medical or nursing staff were called to give evidence. I shall make some comment on that below.

44. The mother's evidence was that there were several attempts to deliver JRM. For obvious reasons, she can say little which is relevant to the issue of the position of the baby or the use of forceps. The father gave evidence. He described how there was a large team of people in theatre. He says that JRM was delivered first, with the use of forceps. It took a little force to remove him, and he was not moving. He was surprised by the degree of force that was used. He said that two nurses at the Natal Intensive Care Unit ("NICU") informed him that they had never seen such bad bruising on the face and chest of a baby.

Bruising and the use of forceps

45. Given the ample evidence from the NICU case notes, and the photographs (both of which I consider below), there can be no doubt that JRM was bruised after birth, and significantly so. Although there was some difference of view about the interpretation of the photographs, all were agreed that JRM was bruised to different parts of his head as well as elsewhere. There were issues about where on the head the bruising was, and how that could have been caused.

46. Forceps were used in the birth, and it is necessary to understand the evidence about their use, and about the position of the baby before delivery. The starting point for determining the issues in this part of the case is to understand the evidence which I heard about the use of forceps. The type used here were Neville Barnes forceps. According to Dr Mahfouz, if the baby had been in the OL position he would have used rotational forceps. Neville Barnes forceps have two arms. Each is curved, but consists of a curved paddle shape whose centre has been removed. If applied to an OA baby, the forceps are applied into the birth canal so that they approach the baby's head from above and behind. They grip the child's head on either side, with the end of the paddles across the lower part of the cheeks, and the ear within the in the open area between the two sides of the paddle, or perhaps under one of them. The paddle is put over the child's head from behind the occiput and a little below the crown. The effect is that a baby in the OA position held by the forceps will be pulled head first, with the sides of the head being in contact with the outer edges of the paddles. If the child is OA, no part of the paddles will, when being inserted into the vagina, pass over the scalp, centre forehead, chin or nose of the child. The handles of the forceps are so designed that when the forceps are properly engaged, they can be "locked" together.

47. If the child was, by contrast, in an OL position, then the position of the forceps "paddles" will have been rotated through 90 degrees in relation to the child. One paddle will pass down across the face, and the other down the back of the head. As the forceps was placed over the baby, the lower inwards curving end of one paddle would pass across the front of the scalp, the central forehead, nose, and mouth of the child, and reach down to the chin. The passage of the other paddle's lower end to the rear of the child's head would pass down across the scalp from around the crown area. As shown by the application of the forceps to mannequins, there would then be a gap between the curve of the paddle and the lower part of the rear of the head, but firm contact with the front of the child's head from forehead downwards along the outer parts of the paddle.

48. It was therefore apparent that the location and degree of bruising was of importance. Apart from the evidence of Dr Mahfouz and Dr Hoo, there are three contemporaneous sources of evidence about the incidence and location of bruising, namely the father's evidence, the medical notes made when the baby was admitted to and then cared for in the NICU, and the photographs taken of JRM by his father and mother.

49. As to the <u>first</u>, the father's unchallenged account was that the nurses in the NCIU said that they had never seen a baby with such bad bruising to the face and chest.

50. The second is the record of the notes kept in the NICU relating to the claimant's treatment and care, and subsequent documents written by those caring for the Claimant at the Defendant's hospital;

a) the first note made in on 28th February 2009, records the claimant at 6.00 am as being bruised to the face, chest and arms on arrival in the NICU, and before a face mask was applied for respiration, or intubation attempted;

b) a retrospective note written by a Consultant Dr Bhat of a visit at 12.30 on the same day, records the child having areas of bruising over face, scalp and limbs;

c) a Nursing Care Plan drawn up on that date records him as being "very bruised- mainly head/face/abdomen;"

d) at 19.30 pm on that date he was recorded in the day nursing entry as "still very bruised;"

e) on 1st March 2009 at 7.00 am he was noted as having a bruised face and left shoulder. The nursing care plan prepared that day describes him as "very bruised over facial area and left shoulder." At 19.15 the same day he was described as "very bruised" and "a bit puffy;"

f) on the next day 2nd March, he was described as "still bruised and oedematous." The Nursing Care Plan described him as "bruised- face and chest and left shoulder." The same description was given in the Nursing Care Plans of 3rd – 5th March 2009 inclusive:

g) a report written by a Dr Murthy on `2nd March 2009 uses this description: "Baby was admitted……Noted to be heavily bruised."

h) on 6th March 2009 the Nursing Care Plan noted "bruised on face and chest area since birth." It was noted again on 7th March 2009 but some improvement was noted. On the 8th March 2009, the terms of the note of 6th March were repeated. On 9th March 2009, the note is to the same effect;

i) on 10th March 2009, the bruising to face and chest was noted as being "lessen" (sic).On 12thMarch, nothing is noted about bruising. A reference to bruising to chest and face was made on 14th March. On 15th March the note refers to bruising on his upper torso which was resolving.

j) a clinical history written on 11th March by a Consultant in the NICU, Dr Silke, says this: "Clinical details:……29/40 forceps delivery. Bruising ++."

k) on 20th August 2009 a letter was sent to a respiratory paediatrician at Great Ormond Street Hospital enclosing "a comprehensive summary of his neonatal course and his current status." It was written by Dr Reyes on behalf of the Consultant in the NICU. It records the following

> "Delivery: Difficult forceps assisted vaginal delivery after spontaneous premature rupture of membranes……..
>
> Resuscitation: (JRM) was noted to be bruised and oedematous at birth….."

It then describes how he was ventilated, intubated and given CPR, and was then taken to the NICU.

l) a letter was written to JRM's General Practitioner by a Dr Wellington at the Defendant's hospital. It said this

> "(JRM) had a very stormy neonatal course. (JRM) was born by vaginal forceps delivery……..It was a difficult extraction and at birth (JRM) was bruised and oedematous……"

m) a transfer letter was sent on 14th October 2009 from the NICU to the High Dependency Unit. It stated that JRM had had a "difficult forceps delivery"

n) a very similar description appears in the High Dependency Unit ("HDU") admission form of the same date.

51. The third source of evidence is the series of photographs taken of the claimant on 28th February, 1st, 2nd, 4th, 6th, 12th, 13th, 14th and 28th March, and 21st April 2009. They were taken by one or other parent using a mobile telephone. The claimant was dressed in, inter alia, a woolly hat which obscured much of his scalp.

52. The photographs were the subject of much evidence and comment at trial. I start by saying that they were not taken by a professional or medical photographer. I have seen them both in their original digital form, and when printed out. There is little difference between the former and the latter. Evidence about their interpretation was given by Dr Mahfouz, Professor Bennett and Mr Walkinshaw.

53. Dr Mahfouz was cross examined about the bruising. He agreed that some of the bruising to the child was caused by the forceps, but not all of it. While he said that the pessary could have been responsible, he accepted that the bruises to the face could have resulted from the application of the forceps, but not that to the arms. He said that the baby was pre term and fragile, but when pressed, he said that he saw nothing during delivery which could have

caused bruising to the chest or arms. He said that if the baby had been in the OL position, he would have expected to see patterned marks on the head.

54. When asked to consider the photographs taken on 1st March 2009, he accepted that they showed bruising to the tip of the nose. He did not accept that it showed it below the lower lip. He accepted its presence above and to the right of the right eye and above the left eye. He accepted that all the bruising shown was to the central part of the face. He agreed that the bruising to the nose was not where one would expect it if the baby was OA, and that it was what you would expect if the position was OL. He did not accept that he had caused it. He said that the bruising astride the nasal bone could have been caused by the use of a mask subsequently to resuscitate the baby. He gave the same explanation for the presence of bruising on the right side of the face and lower lip.

55. He agreed that there was possibly some bruising to the left side of the baby's head. He denied that he used any excessive force. He said that had the blades been applied wrongly, he would have expected a vertical mark at the back of the head.

56. Professor Bennett had examined the photographs. He considered that there was bruising shown which started on the right of the nose and passed to the right hand side, which he considered was suggestive of forceps bruising. He accepted that it was also consistent with an OA delivery. He discounted the various other ways in which the bruising could have been caused, such as the use of a mask, and intubation. He accepted that use of a laryngoscope might cause bruising to the chin. It was inconceivable that the insertion of a nasal gastric tube would have caused the level of bruising shown "unless the paediatricians were very heavy handed.". So far as the scalp was concerned, the photographs showed bruising there. None of the other suggested methods could cause bruising to the scalp. It could not be caused by handling, or the passage of the baby down the vagina. He did accept that the bruising to the chest and arms could have been caused by completion of labour. He would have expected no bruising in the central facial area if the forceps had been applied correctly. He said that it was impossible if the forceps were applied correctly. He did accept that in very rare cases the bruising could spread over the central part of the face. He did not accept that the commonest injuries were to the scalp. He did accept that the pessary could have caused bruising to the scalp, but if it had done so, it would have been unlikely to have lasted for 14 days.

57. Mr Walkinshaw said that preterm babies were more prone to bruising. He considered that the bruising to the right eye was consistent with his view that the evidence did not show use of the forceps in the OL position. He accepted that, if the baby were OL, the process of applying the forceps

would have taken them across the scalp, whereas the forceps would not do so in an OA delivery. If the baby had been OL, he would have expected to see "tramlines" running down the face and cheeks, which he considered to be absent in the photographs. He agreed that if the forceps had been applied when the baby was OL, the end of the paddle would pass across the end of the nose on its way into position. He thought it was possible that the facemask had caused bruising, although he agreed with Professor Bennett that it was of very lightweight construction.

58. In cross examination, he agreed that there was bruising to the right side of the face, under the mouth and to the nose and mouth, as well as the chest. He agreed that the bruising was on the centre of the face and was due to the use of forceps. However he considered that that to the end of the nose and to the mouth had more than one explanation. He accepted that his witness statement had not referred to the facemask or the use of CPR (which had occurred here) had caused that bruising. He also accepted that if one looked at the neonatologists' note of what occurred on JRM's admission to the NICU, the bruising was observed before the face mask was applied, and before intubation occurred. He accepted that more force is required to deliver an OL baby than an OA one. He also agreed that the bruising in this case was severe, but not such as to be inconsistent with there only being two gentle pulls with the forceps.

59. While much evidence was exchanged about the causation of the injury to the spine, that was overtaken by the agreement between neurologists to which I have already referred. Both parties invited me to rely upon it. That being so, I set aside all other evidence on potential causes of the injury, including that of Mr Walkinshaw. Given the existence of the agreement, I have not set out any of that other evidence in this judgement.

(c) Legal Principles

60. The relevant legal principles, which are well known, are to be found usefully summarised by Dove J in *XYZ v Warrington & Halton NHS Foundation Trust* [2016] EWHC 331 (QB) at [60]- [61], to which Counsel referred me, and which I gratefully adopt

> "60 These issues must be evaluated against the appropriate legal test which was established in the seminal case of *Bolam v Friern Hospital Management Committee* (1957) 1 WLR 582. The essence of the test was distilled by Lord Scarman *in Sidaway v Governors of Bethlem Royal Hospital* [1985] AC 871 as follows:
>
> > "a doctor is not negligent if he acts in accordance with a practice accepted at the time as proper by a responsible

> body of medical opinion even though other doctors adopt a different practice."

61 This test was further elaborated upon and expanded by the House of Lords in the case of *Bolitho v City and Hackney Health Authority* [1998] AC 232 in which Lord Browne-Wilkinson stated as follows:

> "the court is not bound to hold that a defendant doctor escapes liability for negligent treatment or diagnosis just because he leads evidence from a number of medical experts who are genuinely of opinion that the defendant's treatment or diagnosis accorded with sound medical practice. In the *Bolam* case itself, McNair J. stated [1957] 1 W.L.R. 583, 587, that the defendant had to have acted in accordance with the practice accepted as proper by a "*responsible* body of medical men." Later, at p. 588, he referred to "a standard of practice recognised as proper by a competent *reasonable* body of opinion." Again, in the passage which I have cited from *Maynard's* case [1984] 1 WLR 634, 639, Lord Scarman refers to a "respectable" body of professional opinion. The use of these adjectives -responsible, reasonable and respectable--all show that the court has to be satisfied that the exponents of the body of opinion relied upon can demonstrate that such opinion has a logical basis. In particular in cases involving, as they so often do, the weighing of risks against benefits, the judge before accepting a body of opinion as being responsible, reasonable or respectable, will need to be satisfied that, in forming their views, the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter.
>
> …in cases of diagnosis and treatment there are cases where, despite a body of professional opinion sanctioning the defendant's conduct, the defendant can properly be held liable for negligence (I am not here considering questions of disclosure of risk). In my judgment that is because, in some cases, it cannot be demonstrated to the judge's satisfaction that the body of opinion relied upon is reasonable or responsible. In the vast majority of cases the fact that distinguished experts in the field are of a particular opinion will demonstrate the reasonableness of that opinion. In particular, where there are questions of assessment of the relative risks and

> benefits of adopting a particular medical practice, a reasonable view necessarily presupposes that the relative risks and benefits have been weighed by the experts in forming their opinions. But if, in a rare case, it can be demonstrated that the professional opinion is not capable of withstanding logical analysis, the judge is entitled to hold that the body of opinion is not reasonable or responsible.
>
> I emphasise that in my view it will very seldom be right for a judge to reach the conclusion that views genuinely held by a competent medical expert are unreasonable. The assessment of medical risks and benefits is a matter of clinical judgment which a judge would not normally be able to make without expert evidence. As the quotation from Lord Scarman makes clear, it would be wrong to allow such assessment to deteriorate into seeking to persuade the judge to prefer one of two views both of which are capable of being logically supported. It is only where a judge can be satisfied that the body of expert opinion cannot be logically supported at all that such opinion will not provide the bench mark by reference to which the defendant's conduct falls to be assessed."

(d) Discussion and Conclusions

61. As noted above, agreement was reached between the parties that the critical damage (to the anterior aspect of the spinal cord) was caused either by the use of the forceps when the child was in the OL position, or by an embolus. If the former, the Defendant accepts that the use of the forceps was negligent, and that it could have caused the injuries. It follows that a critical issue is whether the baby was in the OA or in the OL position, remembering always that Dr Mahfouz's evidence and approach was to treat the baby as being in the OA position.

62. That being so, I regard the issue about the ante-delivery treatment as irrelevant to the main issue, unless it could be shown by the Claimant that, had the delivery occurred a day or two days earlier, it was probable that the baby would not have required delivery by forceps, and that damage would not have occurred thus. There was an agreement between Professor Bennett and Mr Walkinshaw on this topic in the following terms. Having agreed that if the baby's head was wrongly identified as OA, but was in fact OL, that was unacceptable and a breach of duty, they were asked if it was agreed that if labour had been induced on 26th or 27th February 2009 whether it was

agreed that "it is unlikely that such an error would have been made?" They did so, but went on: "given that we agree that mistaking OA for OL in a preterm infant" (by which they undoubtedly meant mistaking OL for OA) "is care below a reasonable standard, it is unlikely such an error would have been made at a different time or by a different examiner." However Mr Walkinshaw referred to the difficulties inherent in what he called the "on another day" approach. Professor Bennett considered that, had labour been induced, it would have resulted in many other circumstances of labour and delivery being different. He considered that earlier removal of the pessary would have affected the descent and rotation of the claimant's head, which would not have been in the same position had a forceps delivery been required. He thought it possible that the pessary could have caused some oedema which made identification of the baby's position difficult. He also considered that JRM might not have required an instrumental delivery, and that it was possible that a different doctor may have undertaken the delivery and not made the same errors.

63. I have considerable concern about this approach to causation, albeit that there seems to have been some, albeit heavily qualified, agreement between the two expert obstetricians. The Claimant's case has two limbs

> i) The CRP reading and the clinical signs of pain and offensive liquor should have led to an earlier delivery by induction. That was negligent on the part of the Defendant. Damage was caused by the way in which the delivery was carried out, with an OL presentation being mistaken for an OA one;
>
> ii) Whatever the conclusions with regard to the CRP reading, the delivery was negligently conducted.

64. It follows that it is an intrinsic part of the Claimant's case to show that the injury to JRM occurred during the delivery, and that it did so through negligence. This is not a case in which the Claimant's case was that the injury sustained was the inevitable result of a forceps delivery; it was that it was the result of this particular and negligently conducted forceps delivery.

65. In any event, I also consider that the Claimant has failed to show that the knowledge of the elevated CRP reading, taken with the evidence about the pain experienced by the mother, and the nature of the liquor, would have resulted in an earlier intervention. There is debate about the significance or reliability of CRP readings. I was unimpressed by the arguments of those (principally Ms Penna, and to an extent Mr Walkinshaw) who gave evidence which seemed to doubt the relevance of CRP readings when they are elevated. While it is true that the studies show that there may not be elevated CRP readings when CA has set in, and therefore that they may give a false *negative*, they do not show that the opposite is true- i.e. that elevated

readings may exist in the absence of CA, remembering always that histological data is always inherently more likely to reveal the presence of CA than clinical signs.

66. In any event, it was common ground that an elevated CRP reading indicates that inflammation is present, and that CA causes inflammation. That being so, it was eventually accepted (and rightly so) that it is prudent to check CRP readings, as was done here. Indeed, Mr Walkinshaw, the Defendant's expert witness, told the court that he always insisted on frequent CRP readings when treating a patient. They provide a warning of what may be occurring. There was a keenness by Ms Penna and by the Defendant generally to downplay the significance of CRP readings, to a point where I was almost being asked to discount them, and to imagine that their being taken was an unnecessary and irrelevant piece of clinical practice. That approach confused two issues: first whether the CRP readings were relevant, and secondly what weight they should attract when making a clinical judgement. I regard the conflation of the two as illogical and unreasonable, and at odds with what actually happened, which was that CRP readings were taken, and were taken into account. The CRP readings were taken because they were thought to be relevant, and because the readings provided information of significance, to be set alongside all other pieces of evidence, and then addressed along with all the other information using clinical judgement.

67. So far as the question of the pain experienced by the mother is concerned, and the question of the liquor, there is a clear conflict of evidence between her and Ms Penna. I accept the mother's evidence that she was in pain. The notes show that she was being prescribed additional analgesics. However the degree of pain is important. I accept that the notes did not reveal pain of particular severity. Given the contemporaneous notes made by Ms Penna, and the lack of clinical signs on examination, I do not consider that her account can be discounted. That is not to disbelieve the mother, and I have some sympathy with her for her view that she was not being listened to sufficiently, but I am not satisfied on the balance of probabilities that Ms Penna's evidence is wrong. I suspect that the difference can be explained in terms of the difference in perception by the mother enduring the anxieties of serious complications in her first pregnancy, and those of the experienced obstetrician.

68. As to the production of offensive liquor, the notes are inconclusive. Ms Penna was entitled to take the view that there was no evidence of offensive liquor. Ms Penna also palpated the mother's abdomen and uterus, and found no tenderness or signs of inflammation.

69. Despite my being unimpressed by the attempts at the trial to downplay the significance of the CRP reading, I do accept the case for the Defence on this issue about the weight to be given to CRP readings in the making of the relevant clinical judgement in this case. I accept the evidence of Ms Penna and Mr Walkinshaw that, in the case of a pregnancy of some 13 weeks less than the normal term of 42 weeks, it was desirable to extend the gestation of the foetus for as long as possible, and that clinical symptoms, or the lack of them, had to be considered alongside the CRP readings. One elevated CRP reading was important, but not conclusive that delivery must then occur. In my judgement, the weight to be given to CRP readings in her clinical judgment was a matter for Ms Penna. Her evidence, supported by Mr Walkinshaw, was that the elevated CRP reading would not have led to an induction of labour earlier than the day of delivery. In my judgement, and applying *Bolam* principles, the Claimant has failed to show that knowledge of the elevated CRP reading, taken on its own or together with the other clinical signs, should have caused the delivery to be induced.

70. There was also an issue about the presence of the pessary in the cervix. It had been inserted as part of a study into whether the use of a pessary would reduce the incidence of pre term pregnancies. The thinking was that it is thought that the baby's head pressing against the cervix may be a trigger for labour to start, and that if the head is kept from contact with the cervix, a premature delivery may be avoided.

71. The pessary is so constructed that it is malleable if sideways pressure is exerted, but it can resist pressure on the vertical axis. That means that it can be removed easily with a finger inserted alongside it. The central issue between the parties was whether it was negligent to leave the pessary in situ. I am not satisfied that the decision to leave the pessary in situ was negligent. In any event, I do not consider that there is any reliable evidence that the pessary had any causative effect on the mode of delivery.

72. I turn now to the question of the mode of delivery.

73. In my judgement, the best place to start consideration of this issue is the record made in the NICU on 28th February 2009. That shows that when JRM was admitted to the NICU, and before any attempts at respiration through the face mask, or intubation, or any other procedure, he was bruised over his face, chest and arms. Dr Bhat of the NICU noted bruising to the scalp on the same day. The bruising to the face remained until 14th March. The Nursing Care Plan of 28th February, the note made in the evening of 28th February, and those on 1st March described him as "very" bruised. The note made in the evening of that date described him as "very bruised and puffy." The report by Dr Murthy on 2nd March shows that C was heavily bruised. Given

all that evidence, one must conclude that the bruising can only have occurred during delivery.

74. It is unfortunate that the Defendants did not call any of the clinicians or nurses who dealt with JRM on the NICU to describe his condition, and especially so given the importance of the issue about the location of the bruising. But, notwithstanding their absence as witnesses, the best evidence of his condition after delivery must be found in those notes and records. I find it impossible to reconcile what is said in those notes with the evidence of Dr Mahfouz, who says that nothing occurred which would cause bruising of the kind which this baby had received. Indeed, his description of what was to him a straightforward delivery cannot be reconciled with the observations made in the records, or in the subsequent reports. One can safely dismiss the idea that the facial bruising could have come about through application of a breathing mask or intubation, or any other procedure in the NICU. The summary report of 20th August 2009 shows that he was bruised after delivery and before any such procedures occurred. It was noted on his arrival in the NICU before any such procedures were undertaken there. In any event, I accept Professor Bennett's evidence that they were unlikely to have caused bruising.

75. There is no evidence before me that the Claimant was more susceptible to bruising than other babies born at this level of gestation. The bruising noted on C's admission to the NICU can only have occurred during birth. The NICU records, and the summary of 2nd August 2009, corroborate the evidence of the father that the midwives at the birth remarked on the level of bruising. I am also satisfied that Dr Mahfouz' evidence about the delivery, and that of Dr Hoo is, at the very least, unreliable in important respects. That evidence, taken in the round, suggests that Dr Mahfouz did not use two gentle pulls. I reject Dr Hoo's evidence about the two pulls. His view of the delivery was largely obstructed, and he never mentioned them in his statement of 2009, as opposed to his witness statement made in 2016. I do not consider that he was able to see how many pulls there were, or how forceful they were. It is to be noted that the Defendant did not call either of the midwives present, nor any of the nurses present, to give evidence about Dr Mahfouz' conduct of the delivery.

76. I turn now to the location of the bruising. This is an important matter, as it can indicate whether the forceps were properly applied. I regard it as most significant that there was bruising to the nose and to other parts of the central facial area. There was also some bruising to the scalp, although the extent is unknown. In my judgement, while the location of the bruising is consistent with the forceps being applied to the baby in an OL position, it is not consistent with the baby being in an OA position. While the Defence suggested other potential causes which could have occurred after the birth

(the application of the breathing mask, intubation etc) the summary report, and the NICU notes show that such matters could not have caused the bruising noted after birth and again on arrival in the NICU. That leaves one other suggested cause, which is Dr Mahfouz' view that the bruising to the nose could have been caused because the nasal bone could have been pressed against the vaginal wall as a result of the presence of the pessary. I regard that as speculative. Further, the severity of the bruising generally, and its extent away from the tip of the nose, suggests strongly that there was not a cause peculiar to the nose.

77. I refer finally in this section to the various other reports, letters and notes referred to at paragraph 50 (i)-(n) above, including the summary sent to Great Ormond Street Hospital by KCH. The account in those documents is supported by the contemporaneous notes made in NICU. It also gives strong support to the father's evidence that the nurses remarked on the severity of the bruising. I find it impossible to reconcile the account given in that substantial body of evidence of a difficult forceps delivery, which caused extensive bruising, with the accounts given by Dr Mahfouz and Dr Hoo.

78. The fact that the baby was so bruised afterwards shows that no little force was used. That is consistent with it being an OL presentation, which required more force. The location of the bruising, as previously observed, is consistent with an OL presentation.

79. It is common ground that if the baby's presentation was OL, Dr Mahfouz was at fault for not identifying that, and for proceeding as if it were an OA presentation. His evidence was unequivocally that the baby's presentation was OA, and that he had checked that. Given the fact that there is substantial evidence that the baby was actually in an OL presentation, that must undermine his credibility as a witness, which is already severely damaged by his insistence that nothing occurred in delivery to account for the bruising seen on the baby, save for its nose. Under the circumstances, I reject his evidence as not credible. In my judgement, the true position is that once he had detected the changes in the foetal heart rate, he decided that he had to get on with the delivery, and that he assumed that the position of the baby was OA, or did not check it carefully enough. Whether that be true or not, what the Claimant has shown, and has done through the NICU notes, is that this was a delivery by forceps which involved the use of a considerable degree of force and involved the application of the forceps in an OA mode to a baby who was actually in an OL position.

80. That the use of force and the OL presentation could have caused the injury to the spinal cord is agreed. The Defence case at trial realistically accepted that if I found that the baby was OL, then that was the cause of the injuries. That accords with the view I would have formed in any event. The agreed

statement of Dr Sunny Philip and Dr Martin Smith, both highly qualified paediatric neurologists, includes the following:

> i) JRM suffered the acute spinal cord injury around the time of his birth;
>
> ii) he suffered vascular injury to the spinal cord due to occlusion of a branch of the anterior spinal artery. The two potential causes of that were either traumatic injury causing tearing of the lining of the artery (arterial dissection), and subsequent clot formation within the vessel, or occlusion due to a blood clot or placental embolus travelling from elsewhere and lodging in the arterial lumen.
>
> iii) if the court accepted that there was excessive force and traction from instrumental delivery, it was agreed that the most likely mechanism of injury is the arterial dissection referred to above. If there was no significant trauma, then an embolic source was more likely.

81. It follows that the injury which JRM sustained

> i) occurred around the time of birth;
>
> ii) is consistent with the use of excessive force and traction from instrumental delivery, which if it occurred was the more likely of the two potential causes of injury.
>
> The fact that he was found to have endured an injury at around the time of birth, which injury and its cause were consistent with the application of excessive force and traction, is of course itself capable of being evidence of their application. Acceptance of the alternative explanation for the injury requires one to accept that this child was the subject of a tragic coincidence. If the NICU records had been different, that might have been less easy to exclude. Taking all matters together as one must, the alternative explanation is impossible to accept.

82. Applying the appropriate test that the Claimant must prove his case to the standard of the balance of probabilities, I make the following findings. I find that had Dr Mahfouz examined the mother properly, he would have found that the baby was in the OL position. His subsequent application of the forceps to the Claimant in the OL position resulted in increased force being required. I find that JRM was delivered with excessive force, with the forceps being placed in the wrong position, and then pulled vigorously. The extensive bruising sustained, and the infliction of an injury consistent with excessive force being applied, support that finding. That finding is also consistent with the hospital's internal records. I also find that the misuse of the forceps and the mode of delivery adopted by Dr Mahfouz caused the

injury to the Claimant. The carrying out of the delivery thus by Dr Mahfouz fell far below the standard of care to be expected of him. It is accepted by the Defendant that if I made those findings, there must be judgement for the Claimant.

83. I cannot leave the case without making two comments. The case before me for the Defendant was conducted with scrupulous fairness and considerable skill by Mr Evans, and the conduct of his instructing solicitors appeared to me to be most efficient. However, in the light of the terms of the NICU records, notes and reports, and the other documents to which I have referred, I am very critical of whoever it was in the Defendant Trust or in the NHSLA who considered that this claim should be resisted on the basis (among others) that the delivery was a straightforward and unremarkable forceps delivery. It must have been known for a long time that Dr Mahfouz' evidence about the delivery was, to say the least, difficult to reconcile with the internal notes and records, where the obvious injuries to the baby had excited so much concern and comment by those treating him. It was an obvious lacuna in the Defendant's case that, in a claim where so much turned on the evidence that this child was injured at round the time of his birth, no midwife or nurse present at the birth was called, nor, perhaps more concerningly, none of the clinicians or nursing staff who dealt with the consequences of the labour when C was admitted to NICU.

84. It was also of concern that the agreed statement between Dr Philip and Dr Smith was inconsistent with other evidence contained in reports to be adduced by the Defendant, and notably from Mr Walkinshaw and from Dr Emmerson, a neonatologist, which put forward other causes for the injury, including that the injury was not related to the mode of birth, and in Dr Emmerson's case that it was a congenital abnormality. While I understand a Defendant arguing that the Claimant had not proved causation, that is a different matter from a Defendant asserting different mechanisms on how the injury was caused, and calling expert witnesses who are not in agreement with each other. The various experts are entitled to hold their expert opinions, but it is for the Defendant to determine which case it chose to argue at trial.