IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: 4361/08

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)
Section 67 of the Coroners Act 2008

Inquest into the Death of DEAN SMITH

Delivered On:	23 May, 2012
Delivered At:	Melbourne via Video Link to Sale
Hearing Dates:	15 and 16 February, 2012 at Sale Magistrates Court, Princes Highway, Sale
Findings of:	JACINTA MARY HEFFEY, Coroner
Representation:	Mr Bruce McTaggart of Counsel representing Central Gippsland Health Service

Police Coronial Support Unit: Leading Senior Constable Remo Antolini

I, JACINTA MARY HEFFEY, Coroner having investigated the death of DEAN SMITH

AND having held an inquest in relation to this death on 15 and 16 February, 2012 at Sale

find that the identity of the deceased was DEAN SMITH

born on 25 September, 2008

and the death occurred on 26th September, 2008

at Royal Womens Hospital, 20 Flemington Road Parkville 3052

from:

1a. HYPOXIC ISCHEMIC ENCEPHALOPATHY

in the following circumstances:

1. Baby Dean Smith was the first child of his parents Ian and Deidre Smith. His mother, aged 32 years, had had an uneventful pregnancy and the estimated date for delivery was determined by her obstetrician Dr Anu Sarkar to be the 13th September 2008. At 7.00pm on the 23rd September, 2008 when she was estimated to be 40 weeks, 11 days, she was admitted to Central Gippsland Health Service for induction of labour. At 4.16am on the 25th September, she was delivered of baby Dean. He was found to have no spontaneous respirations, poor circulation and a low heart rate. He passed a large black meconium stool at delivery.

2. He was intubated and transported to the Royal Womens Hospital where intensive care treatment and testing continued. However, he had persistent evidence of severe neurologic impairment, was comatose throughout with fixed dilated pupils. Testing revealed minimal brain activity. Two consultant neonatologists independently formed the view that he had an extremely poor prognosis and after extensive discussion with his parents, intensive care ceased and he was provided with palliative care only. He died shortly after ventilation ceased on the 26th September, 2008.

3. Independent obstetrician and gynaecologist, Michael Sedgley, was retained by the Coroners Office to provide an expert opinion into the management of the delivery. He gave evidence at the Inquest.

4. The inquest further heard evidence from the mid-wife in charge at the time of the delivery, Camille Rowan, the assisting mid-wife Marg Allan and Dr Anu Sarkar.

5. Dr Ka Chun Tse, the current Director of Medical Services at Central Gippsland Health Service was the last witness and he told the court that he believed that all the CTG machines at the hospital had been replaced since 2008. This had occurred due to what he described as a number of adverse events "where the quality of the CTG machines was thought to be a contributory factor" and his understanding was that "the maternal and foetal heart rates can sometimes be not as clear as with the current machines". Dr Tsa was not at the hospital in 2008 and was unable to give evidence as to whether, in

this particular case, a mis-reading of the CTG traces was considered to have played a contributory role. He gave evidence about continuing professional education and competency assessments of midwives.

6. The following is an attempt at a time-table of the significant features of Deidre Smith's management from 7.00pm onwards from the 23rd September until the time of the delivery. This task is extremely difficult owing to obvious errors in the charts in terms of times noted and times being overwritten. The chart indicated that syntocinon to augment the labour was administered at 3.55am on the 25th September at a rate of 6 mls per hour and then increased to 12 mls at 3.40am - clearly an error. Midwife Camille Rowan was certain that she did not contact Dr Sarkar (who ordered the syntocinon infusion) until 3.45am; that it would take 10 minutes to set up the infusion and apply the CTG and that therefore 3.55am was the time at which the infusion commenced. She subsequently changed her testimony and conceded that her own writing in the notes suggested she phoned Dr Sarkar at 3.30am. Dr Sarkar on the other hand relying on her mobile phone told the court she was phoned at 3.45am. The Court was informed that the clock in the labour suite was not functioning and a replacement battery operated clock also ceased to function at a later stage. The CTG trace indicates that the trace was commenced at 3.55am. This is a reliable indication. But whether this was at the same time as the infusion or some time after it is not possible to say. (There was no evidence that the CTG hook up occurred prior to the infusion commencing). This is critical evidence as it is possible on one scenario that the infusion was being administered for 15 minutes before the CTG trace commenced.

7.

23/9/2008	
7.00pm	Admitted for prostin induction
8.30pm	CTG attended. Irritable uterus noted. 2 mg prostin administered Pre and post prostin traces normal.
24/9/2008	
4.25am	Re-assessed. I mg prostin administered. Pre and post CTG traces normal.
8.50am	Reviewed by Dr Sarkar. Cervix 2 cm long and 2 cm dilated. Order for cervidil to be administered at some point if no progress.
1.10pm	Mild frequent contractions. A decision made to withhold Cervidil. CTG normal. Plan for Dr Sarkar to 4 AM on the 25th September and possible 1 mg dose of prostin.
11.55pm	Pethidine administered on Dr Sarkar's orders. Cervix fully effaced and 3 cms dilated. Midwives reported foetal heart normal.
25/9/2008	
2.00am	Cervix fully dilated. Transferred to Labour ward. Membranes had ruptured spontaneously.
B/W 3.30am and 3.45am	Dr Sarkar was contacted. Told of slow progress and of caput. Ordered Syntocinon with delivery rate increases. Syntoncinon administered at time which is unclear. CTG trace commenced at 3.55am.

4.13am	Dr Sarkar phoned in. Told of good progress and told midwife she would come in.
4.16pm	Baby delivered following episotomy performed by Midwife Rowan. Dr Sarkar arrives at 4.25am and assists in resuscitation until arrival of paediatrician.

8. Dr Sedgley told the court that in his view the CTG machine should have been continuously applied from 8.00pm the night before or at least from 2.00am onwards. His reason for this was that he classified the labour as a high risk labour, a classification with which Dr Sarkar did not agree. Dr Sedgley considered it to be so due to the fact that Mrs Smith was a primagravida, that she was considerably post-term and because labour had been induced. He also considered the features seen which resulted in the decision not to administer Cervidal, namely frequent contractions lasting "60 - 120 seconds - resting tone" - suggested that uterine tone would have been increased. In evidence Dr Sedgley said that once Mrs Smith needed pethidine (administered at 11.55pm on the 24th September) she was in labour and there should have been continuous electronic foetal monitoring from that time onwards.

9. The midwives who attended the second stage of labour and the delivery had between them many years experience. Dr Sarkar told the court that she felt confident that she could rely on the observations of Midwife Rowan without being required to attend if her attendance was not being sought by Ms Rowan. Both midwives Allen and Rowan considered that the hand-held Doppeler intermittent auscultation was adequate to monitor foetal heart rate for this stage of labour. Uterine tone could be adequately assessed they maintained by resting the hand on the mother's abdomen. They told the court that there had been nothing to suggest any foetal distress.

10. Dr Sedgley in his evidence stated that Doppler monitoring may have indicated foetal distress or it may have missed it. "I think it's an inadequate form of monitoring for somebody who's at a higher risk than normal and who is in labour." The Doppler, he told the court, is purely a measurement of the rate of the heart. The CTG in addition to the rate "also gives you a tracing of the rate as it varies with the contractions. It can show you a short term variability ..... If you have a tracing that's showing a complete lack of short term variability and dipping after the contractions then you know, pretty much, that the baby's very sick and it needs to be delivered straight away and you then decide on the mode of delivery, depending on the stage of labour." Dr Sedgley stated that "it takes about 10 - 15 minutes maybe even 20 minutes to assess if a CTG is normal". For that reason, placing the CTG belts on, at or shortly after the administration of the syntocinon is of no value as it is too late at that stage in the face of foetal distress to do other than deliver the baby vaginally. The administration of syntocinon in a general sense was not unreasonable if the contractions seemed to be weakening, but "it cannot be condoned in the absence of a normal CTG beforehand."

11. In the absence of such monitoring it is not possible to say whether Baby Dean would have shown evidence of distress at or before that point. It would appear clear from the CTGs that were performed following syntocinon administration, that the administration of syntocinon led to increased uterine activity which either exacerbated his distress or caused it. It is simply not possible to say. What is likely is that the distress was caused or exacerbated by a hyper-stimulated uterus keeping a continual pressure on the placental circulation without satisfactory periods of relaxation to allow restoration of blood flow and oxygenation of the foetus between contractions. If fetal distress had been present prior to the administration of the syntocinon and had been picked up by a CTG trace, Dr Sarkar could have been summoned urgently for immediate delivery by forceps or suction which may have resulted in the delivery of a healthy baby.

12. However, sadly for Dean's parents, this must remain hypothetical only.

13. It was put on behalf of Dr Sarkar that Dr Sedgley was expressing his opinion with the benefit of hindsight. However, I was convinced by his evidence that he considered the labour to be high risk for the reasons outlined above and that he believed in an objective way and for persuasive reasons that a CTG trace should have been applied much earlier and certainly 20 minutes before syntocinon was administered. This view was fortified by the difficulty all the witnesses expressed in interpreting the traces after the CTG was applied - which, as I have said, was done either concurrently or after the syntocinon administration.

14. Central Gippsland Health Service has instituted a number of procedures in particular to do with midwifery education and review and has replaced the CTG machines with more modern machines as a result of a number of adverse events in this department. It is not the role of this inquest to investigate other adverse events that have occurred. It is to be hoped that the tragic outcome in this case will remain a constant reminder of the need for effective monitoring from the second stage of labour onwards particularly with an induced labour and if intervention in the way of chemical augmentation is proposed.

I direct that a copy of this finding be provided to the following:

Senior Next of Kin
Investigating Member
DLA Piper acting on behalf of Central Gippsland Health Service

Signature:

JACINTA MARY HEFFEY
CORONER

Coroners Court of Victoria

Date: 23 May, 2012