AIMS For a better birth...

Research Roundup

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AIMS Journal, Winter 1999/2000, Vol 11 No 4

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Dangers of birth before 38 weeks

A review of babies in the Northern Region born at 34 weeks or more who needed ventilation for respiratory distress syndrome, has shown what a huge difference a couple of extra weeks in the womb can make.

Since 1950 the WHO has defined births between 37 and 41 weeks as "term" but the authors suggest this has "clouded clear thought". Their research show that one extra week in the womb makes a huge difference to risk of respiratory distress syndrome - and death.

When born at 34 weeks, 1 baby in 34 needed ventilation. At 35 weeks the risk was halved, to 1 in 73. At 36 weeks it was halved again, to 1 in 140. A 37 weeks it was 1 in 557, at 38 weeks it was 1 in 1692 and at 39-41 weeks it was 1 in 133,227.

When they looked at the reasons why some of the babies had been delivered by elective caesareans at 37-38 weeks instead of 39 weeks onwards, when their risk would be so much lower, the researchers found that some were done simply because the mother had had a previous section, or because the baby was breech. One was done for "fetal growth retardation" though in fact obstetricians had misdiagnosed the gestation - the baby was 34 instead of 38 weeks.

The authors conclude that elective section should be avoided before 39 weeks, unless labour starts spontaneously.

AIMS Comment

This valuable study is yet another example of how apparently scientific and clinical standards are set for

convenience and "political" reasons although they may be both irrational and harmful. Originally immaturity was classified as a baby weighing less than 2,500 grams. However paediatricians realised that this was inadequate,(because babies can be small for dates) so they decided to define 37 weeks onwards as "term" pregnancies rather than classifying by the baby's weight. No one checked whether 37 week babies were at risk of the hazards of pre-term birth. Because of this definition, obstetricians felt confident to deliver 37 week babies because they were called "term" - and mothers were told they were.

Women often call us to ask about dates of their planned caesareans. Our view is that if Nature designed a pregnancy to last around 283 days, there is a good reason for it.

Reference

- Madar J, Richmond S and Hey E. Surfactant-deficient respiratory distress at "term", Acta Paed, 1999; 88: 1244-8.

Painkillers, migraine drugs, fertility drugs and ultrasound - could they cause baby deaths?

A large study has been done on perinatal deaths in 1984 in ten counties in California, comparing the mother's exposure to various drugs, illnesses and procedures in pregnancy with similar exposures in mothers of live babies.

Drugs for migraine taken in the second trimester were associated with a 60% increase. First or second trimester ultrasound exposures were associated with a 20-30% increased rate. Use of fertility drugs nearly doubled the stillbirth rate especially for complications of the placenta, cord or membranes - and so did ultrasound exposure.

Pain relieving drugs prescribed by doctors increased the risk of stillbirth from congenital anomalies when used in the first two months of pregnancy, and stillbirths from all causes when used in the second trimester. However ordinary aspirin or paracetamol were not associated with increased risk.

Mothers of stillborn babies were more likely to have had 'flu in the first trimester, but they were not more likely to have had other fevers. They were more likely to have had urinary tract infections, especially in the first and second trimesters.

AIMS Comment

The title is a bit confusing since they refer to stillbirths when what they actually cover is perinatal deaths since they include deaths within 24 hours of birth.

The fact that they are analysing data from 1984 is particularly useful since there was a sizeable number of women at that time who did NOT have ultrasound. Only 8.7% of controls had ultrasound in the first trimester compared with 15.7% of cases. The authors write "We do not know why ultrasound was performed more often on pregnancies that ended in stillbirth, even after accounting for previous loss and

maternal age...Previous research has not found ultrasound to be harmful to the fetus and we do not believe our association is causal". Although we agree with the authors that the examinations could mean the doctors were more worried about those pregnancies, we have written to them to point out that one study has found a higher perinatal death rate and two have found higher fetal losses in ultrasound exposed babies. We might also point out that fertility treatment patients are also those who are exposed to ultrasound most frequently, and earlier in pregnancy. Could this contribute to their poor outcomes?

Reference

- Pastore L, et al. Risk of stillbirth from medications, illnesses and medical procedures, Paed Perinatal Epidemiol, 1999; 13: 421-430.

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Vacuum and forceps - birth injury risks

A large study of over half a million babies in California provides information on brain injuries according to method of delivery for first babies:

Intracranial haemorrhage risk:

Forceps: 1 in 664
Vacuum extraction: 1 in 860
Caesarean - in labour: 1 in 907
Caesarean - no labour: 1 in 2750
Spontaneous: 1 in 1900

So, as compared with normal vaginal delivery, the risk of the baby having a recorded subdural or cerebral haemorrhage goes up 3.4 times for forceps delivery, 2.7 times for vacuum . For babies who have both vacuum and forceps it is 7.3 times. There are also higher risks for facial nerve injuries (particularly with forceps), other injuries, and convulsions. Although the overall risk is higher for caesareans done during labour than before labour, the highest risk of all was for caesareans done in labour after a failed attempt at vaginal delivery

AIMS Comment

We are very grateful for this study because it is based on a large sample of birth records in California. It is also useful in distinguishing between risk of caesareans done during labour and those done without labour. We are not too happy about unassisted vaginal deliveries being called "spontaneous", when in the USA, as here, they are anything but. How does the haemorrhage risk equate with oxytocin use in labour, rugby-coach instructions to push, and the position of the mother allowed for the delivery?

We should not assume that cases of haemorrhage convulsions, etc diagnosed and recorded on hospital

case notes represent the full total. We know of a number of cases of mothers being accused of harming their babies because there was evidence of subdural haemorrhage; many of these babies had vacuum deliveries.

Vacuum deliveries are now replacing forceps deliveries because they are less likely to cause injury to the mother, but from the cases we see, we are only too well aware that the risk depends on the skill, judgment and experience of the operator. What we would like to see is more attention paid to the skilled midwife who can help the woman achieve a normal delivery without mechanical help.

Reference

- Towner D. et al. Effect of mode of delivery in nulliparous women on neonatal intracranial injury, N Eng J Med, 1999; 341: 1709-14.

Who can read the CTG?

A research team in Portugal decided to see how far experts agreed on interpreting 33 CTGs. They sent them to three doctors who were at reputable academic centres and had published articles on the subject. They were asked to classify them as normal, suspicious or pathological, and to say whether they thought it necessary to closely monitor or intervene.

There was pretty good agreement on what they thought were normal cardiotocograms. - though there was some overlap with the suspicious group but no one thought any of them were pathological. There was much less agreement on what they thought "suspicious". Tracings that had 25 findings of "suspicious" also got 16 findings that they were normal and 18 that they were pathological. Tracings that 14 rated pathological also got 18 assessments that they were suspicious. However, no one thought them "normal".

How did this affect action? 5 reports suggested intervention in cases were 44 reports said no action. 20 CTGs were marked for intervention when 5 reports said monitor and 5 said no action.

However in the three cases where babies had had poor outcome, all three agreed on "immediate intervention", though one of the three had classified it as suspicious rather than pathological.

AIMS Comment

Our readers may remember the Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) report three years ago which recommended specific training for midwives and junior doctors in interpreting CTGs because so many of them were making mistakes which cost lives. At the time we asked "what about senior doctors?" - and we are still asking. Fetal heart monitoring is a classic example of medical technology which spread like wildfire without adequate assessment of efficacy or adverse effects, which included the loss of midwives' Pinard skills.

Reference

- Ayres-de-Campos D. et al. Inconsistencies in classification by experts of cardiotocograms and subsequent clinical decision, Br J Obs Gyn, 1999; 106: 1307-1310.

Interference in first births

A large survey of care given to low risk women having their first babies in maternity units in the UK gives a depressing picture of intervention. Researchers looked at procedures used at 98 hospitals - 40 women at each - and analysed data on over 3,000 women. Women with breech presentations, those being induced or having medical complications were excluded.

Fetal monitoring: Only 5% had no CTGs. 46% had continuous CTGs, (despite there being no proof of benefit) 10% had intermittent CTGs, others had various combinations of baseline, intermittent and continuous. 30% of babies had fetal scalp electrodes. 36% had Pinard/Doppler monitoring (i.e. a midwife using a wooden stethoscope or a hand-held ultrasound device like a Sonicaid)

58% of the women had restrictive monitoring in the first stage of labour (ranging from 47% to 73% at different hospitals) and 48% in the second stage (ranging from 33%-62%)

Vaginal examinations: 72% of the women had more vaginal examinations than would be expected from the length of their labour. Only 9% had fewer examinations than would be expected. Again, there were large regional differences.

Artificial rupture of membranes: 53% had membranes ruptured artificially. 34% up to 4 cm and 48% at 5-8 cm dilatation. 10% of these were done because it was "the policy of the unit" and 29% for "delay" in progress. Some were recorded as being at maternal request. The rate of ARM did not differ much from one area to another.

Augmentation of labour: 37.5% of women had labour speeded up, mostly by drugs. 28% of women got syntocinon, but its use varied from 13% in the lowest region to 46% in the highest.

Pain relief: Only 3% had no pain relief. The most common method used was a combination of injected drugs and inhaled analgesisa (27%) 27% of women had a spinal or epidural in the first stage and 23% in the second stage, but again there were large regional differences (12%-45%)

Type of delivery: 74% had spontaneous vaginal delivery, 14% forceps, 5% ventouse and 6% caesarean. There were no significant differences between regions.

Episiotomy: 46% had an episiotomy and 6% also had tears. 37% had tears but no episiotomy. There was large regional variation in episiotomy rate - from 26% to 67%.

Position at delivery: The most common positions were dorsal (980 women), sitting (967), and lithotomy (579.) We are not told if there were regional differences.

The authors conclude: 1) a number of interventions are used more often than would be expected in low risk pregnancies; 2) that there is substantial geographical variation and 3) the interventions being used are not evidence-based.

AIMS Comment

We are most grateful to the authors (one of whom is Naram Patel, the current President of the RCOG) for this paper, which is the first major study of the frequency of these interventions on primigravidae in the UK. We think that every CHC and Maternity Services Liaison Committee should be asking questions about their local statistics based on this study.

However, these statistics are based on births in 1993-4 and the picture constantly changes. We need to tell women how much the care they get depends not on need, but on local habits. 3160 women were studied, but nearly as many were excluded (2875) because they were not "low risk". Their intervention rates were likely to be much higher. It seems that first time Mums had not much more than a 50% chance of getting into the low risk group.

It is a pity the authors have combined figures on Pinard stethoscopes and hand-held Dopplers, because we can't find out how many babies are not exposed to ultrasound in labour, though the number must be small.

Reference

- Williams F. et al., UK study of intrapartum care for low risk primigravidas: a survey of interventions, J. Epidemiol Community Health, 1998; 52: 494- 500.

Caesareans cause placenta praevia and accreta

A study of over 18,000 deliveries from Jordan found that previous caesarean section increased the risk of placenta praevia (the placenta growing low down in the womb where it partially or completely the baby's exit) from 0.25% to 1.87%. The greater the number of previous caesareans, the more the risk increased. - 1.78% for one section, 2.4% for two and 2.8% for three or more.

The incidence of placenta accreta (where the placenta has invaded the muscle of the uterus and there is no clear separation) was also increased by a caesarean scar. This greatly increases the risk of haemorrhage when an attempt is made to remove the placenta.

If a women with placenta praeavia had no previous sections, the risk of placenta accreta was 9%, but if she had a previous caesarean scar it was 46%.

AIMS Comment

This finding confirms a number of others with similar results.

See also Caesareans Increase Future Risks from the Autumn 1998 AIMS Journal).

Reference

- Ziadeh S et al. Placental praevia and accreta: an analysis of two years' experience, J Ob Gyn, 1998; 19: 584-6