EDITORIAL

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Perinatal mortality in West Africa due to inappropriate medicalisation

In poor countries, perinatal mortality, defined as stillbirths and deaths in the first 7 days of life, represents 40% to 50% of all infant mortality (death before age 1 year) (1). Risk factors and their prevalence are largely unknown, as they have been studied in the hospital setting only. Recently published perinatal mortality data from a very large cohort of West African women are therefore very welcome (1).

A very large study of risk factors. **The study was conducted over 18 months in large West African towns and cities (a). A total of 20 326 pregnant women (94% of all pregnant women identified during this period) agreed to participate. Investigators interviewed the women four times at home during their pregnancy in addition to their usual antenatal visits. The study focused on socioeconomic status, obstetric history, clinical signs and symptoms at 8 months, and the circumstances of delivery.**

About 80% of women were delivered in a health care facility (hospital, health care centre, or private maternity ward). Fifty nine percent of deliveries were assisted by a midwife, 25% by a traditional "matron", and 2.3% by a physician.

There were 19 870 births (excluding multiple births). With 811 deaths (62% stillbirths), the perinatal mortality rate was 41.8 per 1000 (b)(1).

Many factors were strongly associated with the risk of perinatal death. After adjustment for multiple confounding factors, the principal risk factors were classified according to the statistical strength of their contribution to perinatal death (attributable risk).

Unfavourable effect of oxytocin. **The increase in absolute risk associated with factors that could not be identified before the onset of labour were: prolonged labour 12.6%, haemorrhage during delivery 5.6%, hypertension during delivery 5.2%, prolonged membrane rupture 4.2%, and fever (> 38°C) 3.2%.**

The increase in absolute risk associated with factors present just before the onset of labour was: breech presentation 9.6%; and vaginal haemorrhage, hypertension or hospitalisation during the 8th month: 4% to 5% each.

The principal risk factors in early pregnancy were: previous history of infant death shortly after delivery 5.9%; absent male partner 3.5%; history of Caesarean section 1.3%; and more than six previous pregnancies 2.1%.

Surprisingly, use of oxytocin during delivery was associated with an 8.3% increase in the absolute risk of perinatal mortality (c).

Medicalisation can be detrimental. **This study shows that the high perinatal mortality rate in large African towns is due to multiple causes, which can be only be dealt with by implementing a wide range of measures. Antenatal screening can identify some pregnant women at risk, but better investigation is needed at the onset of labour. Those women who are most at risk must be referred to the best-qualified centres, obstetric personnel require better training, and the overall management of these women must be improved.**

The large increase in the risk of perinatal mortality associated with oxytocin use during delivery, which remained significant even when other obstetric factors were taken into account (especially duration of labour), implies that this drug must be used sparingly (d). Oxytocin currently has a negative risk-benefit ratio in West African countries, and the results of this study suggest that the standard of medicalised delivery is less than optimal.

Non-drugs management first. **Better obstetric management would help reduce both perinatal mortality and maternal mortality, which share several common causes, including dystocia, haemorrhage, hypertension and infection (2). West African maternity services must be improved, along with the monitoring of pregnant women by competent professionals.**

a- Burkina-Faso, Ivory Coast, Mali, Mauritania, Niger and Senegal.

b- By comparison, the estimated mortality rate in mainland France was 7 per 1000 in 1997; in Guadeloupe, the perinatal mortality rate fell from 19.9 per 1000 in 1993 to 13.7 per 1000 in 1999 following a very large perinatal health program (ref 3).

c- An attributable risk of 8.3% for the use of oxytocin during labour means that, all other factors being equal, the absolute difference between the incidence of perinatal death among women who receive oxytocin and those who do not receive oxytocin is 8.3%.

d- The multiple precautions that apply to oxytocin therapy are generally poorly known and impractical, as are the contraindications. Studies done in other countries have also shown a close relationship between perinatal mortality and the use of oxytocin (ref 1). According to one clinical pharmacology textbook, high-dose oxytocin can induce uterine wall rupture, perineal and cervical tearing, and fetal bradycardia, arrhythmia, and asphyxiation (ref 4).

1- Chalumeau M et al. "Risk factors for perinatal mortality in West Africa: a population-based study of 20 326 pregnancies" *Acta Paediatr* 2000; **89**: 1115-1121.
2- Prescrire Rédaction "Afrique de l'Ouest. Mortalité maternelle" *Rev Prescrire* 2001; **21** (221): 709.
3- Prescrire Rédaction "Périnatalité en Guadeloupe: des efforts à poursuivre" *Rev Prescrire* 2002; **22** (227): 304.
4- "Oxytocin". In: "Martindale The Complete Drug Reference" 33rd ed, The Pharmaceutical Press, London 2002: 1294-1295.

1- URGENT DRUG