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Can we reduce perinatal mortality in the UK?

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“Have we now reached an irreducible minimum or can more still be done?”

The UK perinatal mortality rate (PMR) improved consistently during the second half of the last century, from 36.9/1000 in 1953 to 21.0/1000 in 1973 and 8.9/1000 in 1993 [101]. This trend has now come to an end. The Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI), which began in 1992 and covers deaths in England, Wales and Northern Ireland, recorded a further slight fall to 8.3/1000 in the year 2000 but since then the PMR has remained static, the most recent figures being 8.4/1000 in 2004 and 8.2/1000 in 2005 [1]. Have we now reached an irreducible minimum or can more still be done?

Definitions

The PMR is ‘the number of stillbirths plus early neonatal deaths, per 1000 live and stillbirths’. A stillbirth is now defined as a baby born dead after the 24th week of gestation (the dividing line having changed from 28 weeks in 1992). Neonatal deaths are divided into ‘early’ (within 7 days of birth) and ‘late’ (from 7 to 27 days after birth). CESDI collects information on deaths occurring outside these arbitrary time-limits but this article will focus on the PMR, which is a useful and comprehensive indicator of the quality of maternity care.

In 2005 the Confidential Enquiry into Maternal and Child Health (CEMACH), which has now taken over from CESDI, was notified of 7225 deaths, but this figure included ‘late fetal losses’ (between 20 and 24 weeks’ gestation) and late neonatal deaths. The number of perinatal deaths as defined above was 5496, made up of 3676 stillbirths and 1820 early neonatal deaths

– twice as many stillbirths as early neonatal deaths. The CEMACH report commented: ‘Since 1992 the stillbirth rate has remained largely unchanged while the neonatal mortality rate has declined significantly... This lack of progress in reducing the stillbirth rate is a matter of public health concern’ [1].

Causes of perinatal mortality

The 5496 perinatal deaths in 2005 were due to seven causes, the most important being ‘unexplained antepartum death’, which accounted for 33% (1818 cases). The next two were congenital abnormality and immaturity, each accounted for 17% of deaths (953 and 948 cases, respectively). These three causes are discussed in more detail below, along with intrapartum deaths, which accounted for 11% of the total, and which the Chief Medical Officer (CMO) has highlighted in his most recent report [2].

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The remaining three causes were antenatal complications (such as hemorrhage or preeclampsia), which accounted for 11% of cases, infection (3%) and ‘other specific causes’ (6%), most of which are impossible to prevent in our current state of knowledge.

Antenatal stillbirths

Antenatal stillbirths are still being accepted by professionals as generally unavoidable, perhaps because CEMACH

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still classifies the majority as “unexplained”. This classification, however, is increasingly being recognized as inappropriate because a substantial number are known to be due to unrecognized intrauterine growth restriction (IUGR). A recent study estimated that over 50% of “unexplained” stillbirths are associated with IUGR [3]. It has been pointed out that approximately 1000 babies die as the result of IUGR every year in the UK and that in the majority of cases these deaths are the outcome of a so-called “low-risk” pregnancy [4].

This is not new information. In 1997, the fifth annual CESDI report included a case-control study of antepartum term stillbirths: around 25% were unexplained and 25% were associated with IUGR, the remainder being due to specific conditions such as placental abruption or abnormal glucose tolerance [5]. Many of the mothers had noticed a change in fetal movements. The eighth CESDI report found that 45% of all stillbirths were associated with suboptimal care, including failure to recognize the “high-risk” woman at booking, and the report recommended better screening for IUGR. It also recommended better communication so that a woman’s concerns regarding reduced movements would lead to a prompt check on the fetus [6].

Despite this, screening for IUGR has not changed. Current guidelines from the National Institute for Health and Clinical Excellence recommend checking fetal growth by measuring the fundal height with a tape measure [7] – a technique which, according to a Cochrane review, is not supported by evidence of benefit or harm [8]. Gardosi and colleagues believe that the sensitivity of fundal height measurement can be improved by using customized growth charts that take account of factors such as the mother’s height, parity and ethnic origin [3]. Others argue that the tape measure is an outdated tool which will never achieve the required sensitivity, and they recommend using ultrasound scans to identify the at-risk fetus [4].

Third trimester ultrasound scanning could also identify malpresentations, a number of which are still diagnosed only after labor has begun. There is, however, great reluctance to consider routine scanning at this stage of pregnancy. Although dating scans in early pregnancy are part of normal antenatal care, as is scanning for fetal abnormality in mid-pregnancy, routine scanning in the third trimester scans is regarded as undesirable on the grounds of cost. It is argued that the time, equipment and personnel required will not be justified by the number of lives saved. Nevertheless, a study of almost 2000 “low-risk” women has suggested that routine scanning may indeed be worthwhile [9] and a larger study is being planned.

Congenital abnormality

As mentioned above, a fetal anomaly scan at around 20 weeks’ gestation is offered as part of routine care in the UK and most women accept this offer. In addition, serum screening for

chromosome abnormalities is widely available in both the NHS and private sectors. In spite of these screening programs, congenital abnormalities still accounted for 1079 deaths in 2005. CEMACH reports do not give details about the types of malformation but data are available from a review of stillbirths and neonatal deaths in Scotland between 1985 and 1999. In this report, 22% of the lethal anomalies were cardiovascular, 18% were chromosomal, 14% were of the CNS and 9% were renal. The biggest group, “other”, accounted for 33% of the total [10]. If perinatal deaths from congenital abnormality are to be reduced, the first step will be to make screening for cardiac abnormalities more widely available. This too requires expensive equipment and a high degree of expertise and therefore it is not being seriously considered because of the cost.

Prematurity

Preterm labor has been the subject of research for many years now. Both its epidemiology and its pathophysiology have been investigated and new tocolytic drugs have been developed. Nevertheless we are still largely unable to predict it, prevent it or stop it progressing once it begins. The improved survival of babies born prematurely has come from better neonatal care and from recognition among obstetricians of the benefits of antenatal corticosteroids. Further major improvements will have to await further medical research, which is beginning to show promise [11].

Intrapartum stillbirths

The latest CMO report includes a section entitled “500 lost opportunities” on intrapartum stillbirths in 2006 [2]. In that year 668,681 babies were born and there were 450 perinatal deaths due to intrapartum causes – a risk of one in 1486, which translates to around three cases a year in a large maternity hospital. When intrapartum deaths were studied by CESDI in 1995, the risk was found to be one in 1561 [12]. This cause of death has not been investigated again by either CESDI or CEMACH since 1995, an omission that disturbs the CMO. One of the ‘key facts’ in his recent report is: ‘It is of concern that the current national survey on maternal and infant deaths no longer reviews the causes of intrapartum-related deaths in detail’ [2].

Why has this subject been quietly dropped? During the last decade lay campaigners have sought to persuade the NHS that birth is a natural process that requires minimal medical intervention. Highlighting the risks of childbirth has been politically unfashionable and there has been little recognition at a political level of the link between safe childbirth and the availability of obstetricians [13,14]. Further, it is possible that analysis of intrapartum deaths might raise the issue of inadequate staffing levels in our labor wards – a major concern for practising midwives and obstetricians. The problem of staffing is highlighted in “Safer Childbirth”, the recent report

from the four colleges involved in setting standards in the UK's labor wards [15]. If staffing levels are to be improved, more money will be required and it is to be hoped that this will be forthcoming. A reaction is now occurring, belatedly perhaps, to the idea that having a baby in the UK today is natural, safe and cheap.

improving the safety of childbirth. Obstetricians have acquiesced too readily at being excluded from so-called "low-risk" pregnancy, where most stillbirths occur. These attitudes have been described as "giving up on getting better" [16]. Sooner or later women will demand improvement, probably through the courts [4], but surely we do not have to wait for litigation or a public enquiry before we take action.

Conclusion

The answer to the question posed in the title of this article is "yes" – we can reduce perinatal mortality in the UK, but only if we want to. This is a big "if". Recently there has been much discussion regarding the problem of maternal mortality in the developing world and the consensus is that what is lacking is political will. The same applies in this country. Those running the NHS in recent years have shown little appetite for

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