PYREXIA IN LABOUR - DO WE TAKE IT SERIOUSLY ENOUGH?

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Maternal mortality remained stubbornly high (one in 250 births) even in developed countries until dramatic falls in mortality began in the 1930s and 1940s. As about half the deaths were due to puerperal sepsis, a major part in this fall was the introduction of antibiotics (other important developments included anaesthesia, improved surgery and safe blood transfusion). When I was first a house officer, any woman who had a fever of 38°C or more during labour or in the puerperium had to be officially reported as a case of puerperal sepsis. This practice was only discontinued in the 1970s. However studies since that time have continued to show a strong association of fever during labour with adverse fetal and childhood outcomes, including a fourfold increase in the odds of neonatal encephalopathy and a ninefold increase in the odds of cerebral palsy. Fever in labour is particularly dangerous when combined with intrapartum hypoxia and acidosis. Part of the reason it is so damaging for the fetus is that the core temperature of the fetus is almost 1°C warmer than that of the mother (this is necessary for the baby to transfer the heat of metabolism to the mother). A maternal oral temperature of 37.5°C is likely to be associated with a fetal temperature approaching 39°C. A landmark paper in the Lancet (Fusi et al, 1989, i:1250-1252) showed that a major cause of intrapartum pyrexia in modern practice is the use of epidural anaesthesia. A paper in Obstetrics and Gynecology in 2001 (98:763-770) reported that after the introduction of epidural anaesthesia on demand, the incidence of recorded maternal temperature in labour above 38°C rose from 0.6% to 11%. Subsequent studies have shown that there is a direct relationship between the degree of temperature rise and the incidence of hypotonia in the newborn, low Apgar scores, the need for assisted ventilation, and the incidence of seizures. When epidurals are used in labour, there is also a more than threefold increase in investigations for suspected neonatal sepsis and a fourfold increase in the use of neonatal antibiotic treatment. Recent studies have shown that this fever is not due to infection, and cannot be effectively treated by minor antipyretic agents such as paracetamol. High-dose steroids have been shown to prevent the temperature rise (probably by suppressing cytokine release) but are likely to have unacceptable side-effects. Instead, a technique for increasing the temperature of blood flowing to the hypothalamus using a neck warmer inducing the mother to down regulate her body temperature shows promise.