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Paradoxical pain

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**Relation of birth variables to death from cardiovascular disease**

**EDITOR,—**D J P Barker and colleagues’ study puts a further nail in the coffin of those who doubt that the intrauterine environment influences later health—in this instance, death from cardiovascular disease.1 A theme running through the Scottish study and those issues on this topic is that maternal nutrition is primarily responsible for reduced prenatal growth. Though there can be no doubting the importance of maternal malnutrition as a cause of reduced fetal growth in poor countries and of such malnutrition as a cause of perinatal death in the early part of this century, where Barker and colleagues’ cohorts were born and brought up, there is no strong evidence of undernutrition now being responsible for restraining intrauterine growth in developed countries.

Maternal diet is only one of the many factors that can lead to fetal growth retardation. To begin to understand mechanisms that might link the environment of fetal life and infancy with later disease, it is necessary to be able to identify factors that need to be considered—for example, Edwards et al have recently proposed that links between the fetal environment, adult hyper tension, and low birth weight could be mediated through dysfunction of the placental barrier to maternal cortisol.2

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**Paraoxidary pain**

**EDITOR,—**David Bowsher defines paradoxic pain as pain in which the pain is no more under- stood as pain that is made worse rather than better by increasing doses of morphine. It has been reliably reported with large doses of intrathecal morphine and probably occurs occasionally with large daily doses of the same drugs intravenously. Bowsher and his colleagues have made a good case for paradoxical pain being the result of a genetic inability to metabolise morphine to the potent morphine 6-glucuronide,3 leaving large quantities of morphine 3-glucuronide (a putative morphine antagonist or a non-specific cerebral stimulant, or both)3 unopposed. It is difficult, therefore, to understand why Bowsher has opted for an alternative definition. It is also disturbing that he has used “over- whelming pain” as a synonym for paradoxical pain. Overwhelming pain is a term used to emphasise a considerably increased level of severe cancer pain.4 It almost always responds to adequate amounts of morphine, coanalgesics if appropriate, and, usually, an axiolytic. A comparable situation is sometimes seen despite large doses of morphine when the patient’s pain variations and fears are being addressed. Thus, in one case, a patient with inoperable cancer of the oesophagus was still in pain despite receiving 12 g of oral morphine a day when he was admitted to a hospice, a week later he was free of pain when taking 60 mg of morphine a day and 10 mg of diazepam at night. His seemingly morphine resistant nociceptive cancer pain responded to listening, explanation, and the setting of positive rehabilitation goals.

Nociceptive pain is also relatively resistant to morphine and other opioids when there is peripheral or central neural sensitisation. Sensitisation occurs in damaged tissue and the surrounding area and in areas subserved by either an injured peripheral nerve or an injured part of the central nervous system. Pain associated with inflamation is a typical example of peripheral sensitisation,5 hence the need to use a non-steroidal anti-inflammatory drug in most patients with painful soft tissue injuries and bursae.6 Morphine alone is often inadequate, but there is nothing paradoxical about this. Central sensitisation may also occur in such cases as part of a secondary “wind up” phenomenon in the dorsal horn. Occasionally this is a specific correlation—for example, with an N-methyl-D-aspartate receptor blocker such as ketamine.7 Central sensitisation in neuro- pathic pain is more complex and, as Bowsher points out, demands a range of alternative measures.4,8

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1 Bowsher D. Paradoxical pain. BMJ 1983;306:473-4. (20 February.)


17 Pasternak GW. Pain Clin (in press).