Correspondence

Rewarming infants on a heated mattress

Sir,

Sarman *et al* have shown that a heated, water filled mattress can provide a superior alternative to maternal skin contact, or an incubator, for rapidly attaining and maintaining normal body temperature in the low birth-weight neonate.¹ In this country, where power failures are very infrequent, an electric mattress heater may be as useful and simple a means of ensuring rapid restoration of normal temperature in the newborn.

To test the effect of such a heater I measured the rectal temperatures of 38 full term infants delivered by uncomplicated vaginal delivery in cephalic presentation after labours lasting no longer than 10 hours. Two groups of infants were studied: 20 born of mothers who had received 100-150 mg pethidine during the last six hours of labour (mean birth weight 3315 g), and 18 who had not (mean birth weight 3339 g). Half of these two groups of infants was nursed in a cot with a 40 watt electric heating pad (Thermega) beneath the mattress, and half was not.

All infants were dried and wrapped in two towels immediately after delivery before transfer to the postnatal ward where their rectal temperatures were recorded with a mercury thermometer. No toilet was performed but a rectal thermocouple (Light Laboratories) was inserted to 3 cm before infants were rewrapped and left undisturbed for the next four hours in a cot in a side room with an ambient temperature of 26°C. Rectal temperatures were recorded at 1, 2, 3, and 4 hours of age. At 4 hours the rectal thermocouple was removed and the infants received their first toilet. Thereafter, until 24 hours, when the rectal temperature was recorded with a mercury thermometer, all infants were nursed without the heating pad.

The rate of rise of the mean rectal temperature of those infants nursed in cots with a heating pad beneath their mattress was faster than that of infants nursed without, whether or not their mothers had received pethidine ($p < 0.01$) (figure). At four and 24 hours there was no significant difference between the mean temperatures of the four groups of infants. The temperature recorded between the upper surface of the mattress and the wrapped infant in a cot containing a heater was 38.4°C and that without a heater 34.8°C.

This small study shows that an electric undermattress heating pad rapidly restores body temperature to normal in the healthy neonate, whether or not he or she has been exposed to pethidine in utero. Such a heating pad is safe and effective and may obviate the use of a radiant heater to diminish loss of body heat from non-asphyxiated infants born of mothers who have received pethidine in labour.²⁻⁴ After prompt drying at birth infants may be safely left wrapped and undisturbed until first toilet at 4 hours of age.

Such an electric undermattress heater may well prove

Figure 1 Rectal temperatures of neonates nursed in a cot with and without a heated mattress.

equally effective in the management of the low birthweight newborn who does not require nursing in an incubator.

I should like to thank Dr EN Hey and the midwives of the Princess Mary Maternity Hospital for their help with this study.

References

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Cholesterol and diet

Sir,

Dr Tarlow reports that the fat intake of many British children currently exceeds 50% of the total energy of the diet.¹