LETTERS

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Sudden infant death syndrome

Sir,

Once again the sudden infant death syndrome has attracted media attention and consequent widespread public speculation as to its cause. However, despite intensive and ongoing research the physician is left with few clear guidelines either for himself or to impart to others.

Sudden infant death syndrome is an unexplained event even after autopsy, with an incidence of about two per 1000 live births. It usually occurs during sleep and is the commonest cause of death in the postneonatal period (from 28 to 364 days of life). The risk is greatest for infants aged between one and four months, for those with a low birth weight, and during the colder seasons.[1] Although the usual age range given is two weeks to two years, a similar syndrome is sometimes seen in older children and adults.

The following facts about sudden infant death syndrome are known: around half the cases of sudden infant death syndrome have some evidence of antecedent respiratory infection; the only consistent post-mortem findings are mild pulmonary congestion and intra-thoracic pinpoint haemorrhages; recent work has shown a high incidence of microscopic changes in the laryngeal area;[2] post-mortem biochemical evidence suggests that death is usually preceded by a relatively long period of tissue hypoxia;[3] proof that some infants have a period of apnoea before irreversible changes occur is lacking, but conventional movement-sensitive monitors will not detect upper airways obstruction where ventilatory efforts continue despite lack of airflow;[4] infant positioning and bedding have now been shown to be important determinants of risk, with the prone position and excess heavy coverings proving undesirable;[5] in the near-miss type scenario, sudden stimulation of the baby often appears to initiate recovery.

We believe that the available evidence points strongly to upper airways obstruction as the most likely aetiology for sudden infant death syndrome, probably in the form of laryngospasm precipitated by reflux or inflammatory secretions. Hypoxic or reflex bradycardia may then lead to asystole, especially in the presence of an immature autonomic nervous system. It is perhaps surprising that the prone position is not to be recommended but side positioning is a safe alternative which is theoretically, if not empirically, better than supine. The role of the baby's coverings is not clear but it may be that restrictive bedding splints the airway in an undesirable position. Obstructive apnoea is a difficult phenomenon to investigate or prevent but pulse oximetry would appear to be the monitoring and research tool of choice in the future.

Thus at present, the following simple advice, designed to protect the upper airway, would appear to be the best on offer: infants should be positioned on their side while they are unattended or sleeping; infants should not have a pillow; bedding should be loosely applied and should not be too warm or restrictive; parents should check the baby fairly frequently to make sure that it is comfortable and not too warm; the infant should be kept in the parents' room at night. This advice is doubly applicable in the presence of respiratory infection, catarrh or vomiting.

We recommend the above in our own departments and feel that it is applicable to all those who deal with a wide variety of young children, whether in general practice or departments of paediatric or accident and emergency medicine. We realize that it is based on an unproven aetiology but the truth remains elusive and the search for it may delay thoughtful intervention.

CHRISTOPHER MOULTON

Accident and Emergency Department
Glasgow Royal Infirmary
84 Castle Street
Glasgow G4 0SF

NICK BROWN

Department of Paediatric Medicine
Yorkhill Hospital
Glasgow G3 8SJ

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3. Rognum TO, Saugstad OD. Hypoxanthine levels in vitreous humor: evidence of hypoxia in most infants who died of sudden infant death syndrome. *Pediatrics* 1991; **87:** 306-310.
4. Foundation for the Study of Infant Deaths and the British Paediatric Respiratory Group. Monitoring and sudden infant death syndrome: an update. *Arch Dis Child* 1990; **65:** 238-240.
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Management of needlestick injuries

Sir,

From our experience in teaching and postgraduate assessment in general practice, it is apparent that many doctors do not have a suitable management protocol for needlestick injuries. This subject was addressed as part of the *Practitioner* education programme (postgraduate education allowance accredited distance learning programme) held in May 1991.