An indirect calorimetry system for ventilator dependent very low birthweight infants

Sir,—While the need for measurement of energy expenditure and nutrient utilisation in sick ventilator dependent infants is undisputed, we have several reservations about the indirect calorimetry system described by Forsyth and Crighton.1 On p316 it is stated that if the ventilator settings are changed, then the oxygen consumption (Vo2) will be underestimated. This is not correct. For instance, if the respiratory rate of a 1 Kg infant is increased from 60 to 80, the difference in the inspired oxygen concentration (FiO2) is 0.2% and the change in the inspired oxygen tension (ViO2) is 2 mmHg, approximately 0.5% of the oxygen consumption.


et al, recently reported 14 cases which they documented in this manner.1

Within a period of six months we have seen three babies with ALTE from three unrelated families. All three had been discovered limp, cyanotic, and apparently lifeless during their afternoon nap. Petechial haemorrhages were found on the face and neck of two of the babies on admission. No other episodes occurred during observation in hospital or the follow up period.

These would probably have remained unreported unless cases were it not that when the third case was brought to the casualty department by the family doctor he was accompanied by the babysitter who had discovered the baby. She was recognised by one of the nursing staff as a regular attendant at the casualty department with minor wounds that were suspected of being caused by automutilation and she had made several allegations of being attacked or raped.

In the ensuing discussions it came to light that this woman was the babysitter who had also been involved in the first two cases. She has since been investigated by the police. However, she has given no strong suspicion of what was the upper airway obstruction of the babies by her, there has been insufficient evidence to bring her to trial.

CVS as described by Soutball et al would have failed in these cases, because it is usually only the parents or very close relatives who are allowed to be continually present with the baby in hospital. Very thorough history taking especially concerning the surrounding circumstances remains extremely important in investigating every case of ALTE especially if imposed upper airway obstruction is suspected.2

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Anal abnormalities in childhood myotonic dystrophy

SIR.—The paper by Reardon and colleagues on anal abnormal signs seen in myotonic dystrophy is worrying on several counts.1 The physical signs are described inadequately which makes interpretation of the paper difficult. The Royal College of Physicians report on anal abnormalities in cases of myotonic dystrophy, which is referenced, is not needed in the need for a consensus on definition and method of examination. Thus 'a reflex dilation of the anus was observed on parturbing the buttocks'. How was the child examined, for how long, and was this a dynamic sign and what degree of dilation was observed? It is noteworthy that only one child in six was said to demonstrate this sign but all had anal laxity.

The illustration shows a degree of anal laxity we have never seen, is this laxity or dilation? Was this degree of gaping achieved on parturbing the buttocks? Was the child constipated and demonstrating the 'visibly relaxed anus' of Clayden?2 This child was 15 years old and had had a lifetime of soiling, what had earlier examinations revealed and to what treatments and manoeuvres had the child been subjected?

Single physical signs are rarely diagnostic and in making a diagnosis of child sexual abuse the jigsaw must be carefully constructed.3 To begin an investigation on the basis of a child with known bowel dysfunction and anal laxity is clearly problematic but in the context of a girl who is alleging abuse it is, in child protection terms, quite proper. Advice to doctors stated 'It is important that the child says very seriously, and to spend time listening to what the child has to say.'5 It is also evident that children with special needs are at risk of abuse and to recognise abuse in children with communication problems requires particular skill.6 Children do need protection from the trauma of wrongful diagnosis but similarly physicians have until recently failed their patients by their inability to recognise maltreatment.

Finally, what proportion of children with myotonic dystrophy have bowel disorders or an abnormal anus on examination? What proportion have no anal abnormalities? The association of two conditions does occur.

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Drs Reardon, Hughes, and Green and Professor Harper comment:
The comments of Drs Wynne and Hobbs reflect the difficulties with which clinicians are obliged to grapple in trying to confirm or refute a suspected diagnosis of child sexual abuse. Foremost among these is the non-specificity of single clinical signs. However, in many instances, abnormalities of anal physiology do contribute significantly to decisions with far reaching effects for patients and families. It is precisely because we absolutely agree with Drs Wynne and Hobbs that 'children need protection from the trauma of wrongful diagnosis' and because of the central role which anal abnormalities and interpretation thereof often has in reaching diagnoses of sexual abuse that we felt prompted to submit our report.

The report did not pretend to be a scientific treatise of anal sphincter dysfunction in myotonic dystrophy but was the report from three unrelated cases of diarrhoea-associated forms of HUS. We hold that diarrhoea-associated forms of HUS are unlikely to be caused by a toxin producing Escherichia coli but by aetiology of D+HUS is likely to be verotoxin producing Escherichia coli, which although similar is not homologous with shigella induced HUS.

Prostacyclin is probably not a circulating hormone in man: its plasma half life is brief and intact molecules cannot be measured directly in clinical practice. Thus the term 'prostacyclin concentration' is at best an extrapolation. Two main approaches have been used to identify abnormalities of PGF2 metabolism in disease states. The more direct of these is to measure the levels of a homologous metabolite such as 6-keto-PGF1α in biological fluids.

Unfortunately Alam et al did not make clear which method they used. The result section and abstract refer to plasma concentrations of 6-keto-PGF1α suggesting direct measurement. However, their method refers to radioimmunoassay for 'prostacyclin', but also to generation of 6-keto-PGF1α by rabbit aortic rings in response to patients’ plasma.

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1 Alam AN, Abdal NM, Wahed MA, et al. Prosta-


Impose upper airway obstruction and covert video surveillance.

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Updated information and services can be found at:
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