

## LETTERS TO THE EDITOR

### Fourteen cases of imposed upper airway obstruction

SIR,—When pointing out the difficulty with covert video surveillance for the detection of imposed upper airway obstruction, Samuels *et al* suggest that suffocation can be diagnosed by using physiological recording.<sup>1</sup> They say, 'the pattern considered suggestive, but not diagnostic of imposed upper airway obstruction, was regular breathing which was suddenly interrupted by the onset of large movement artefact on the breathing movement signal in combination with a pattern of obstruction—that is, continued breathing movements, absent air flow, and a gradual fall in SaO<sub>2</sub> [arterial oxygen saturation]'. In the abstract, they claim these are 'characteristic findings', a view now propagated in an editorial in the *Lancet*.<sup>2</sup>

Despite their claim, these findings cannot be considered pathognomic of suffocation. There are many natural reasons for such findings, for example, back arching, fitting, or obstructive apnoea. The figure illustrating suffocation does not fulfil their own criteria. Absent air flow was not confirmed. There was no tachycardia or bradycardia. The movement monitor showed increased movement but at the same rate as the normal breathing.

The following case illustrates the difficulty of interpreting data recorded during an apnoeic episode without a visual record of the event. A healthy 3 day old term infant was monitored with two staff and the mother present. Heart rate, oxygen saturation waveform, oxygen saturation, chest movement, and respiratory frequency were recorded. The video recorder was not working so there was no permanent visual record. The recording started normally. The baby then suddenly stiffened, arched her back and became blue. The mother picked her up and patted her back. The recording showed movement disturbance and initial tachycardia followed by bradycardia. The oxygen saturation was disturbed by movement. Breathing slowly re-established spontaneously, the heart rate rose, and the oxygen saturation signal returned. As breathing became more regular, tachycardia occurred and the infant cried, again disturbing the signals and thus their interpretation.

Subsequently, it was difficult to correlate what happened with the recording. Without video recording the staff and mother were unable to distinguish the effect on the recording of the mother's action and the infant's condition. The recording of this naturally occurring episode is virtually identical to the description of Samuels *et al* 'characteristic of imposed upper airway obstruction', although of course there was no suffocation.

If the ideas of Samuels and his colleagues are accepted mothers of apnoeic babies will be under suspicion because they were alone when the baby had apnoea. The infants may be submitted to physiological recordings which could be used to 'form documentation which may be invaluable as evidence to confirm abuse'. Those working in child abuse must appreciate that physiological recordings, without simultaneous video recording showing suffocation, cannot be used to 'confirm abuse'.

If we are persuaded by this paper to accept this technique of diagnosis, innocent mothers may be accused of a serious crime from which they will find it hard to defend themselves.

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1 Samuels MP, McClaughlin, Jacobson RR, Poets CF, Southall DP. Fourteen cases of imposed upper airway obstruction. *Arch Dis Child* 1992;67:162–70.

2 Anonymous. Diagnosing recurrent suffocation of children. *Lancet* 1992;340:87.

#### Professor Southall and Dr Samuels comment:

Morley *et al* offer no data to substantiate the opinions in their letter. They have selected out of context statements which presumably support their view that both physiological recordings during apparent life threatening events (ALTE) and features of the parental history cannot be used to identify those infants, possibly suffering imposed upper airway obstruction, who should undergo covert video surveillance (CVS). For example, the first two sentences contain conflicting statements concerning 'diagnosis'.

Without an opportunity to examine the physiological recording they propose to be identical to the pattern we find suspicious, it is clear that, by definition, their described event could never be due to imposed upper airway obstruction because two staff members were present when it began. One of the most important features of physiological recordings during imposed upper airway obstruction is that the event *begins* in the presence of the perpetrator alone and does not correlate with the history given (for example, the parent might state that the infant was asleep when the recording will clearly show a pattern consistent with being active and awake).

Unfortunately imposed upper airway obstruction, as well as fabricated data (Munchausen syndrome by proxy), represent frequent mechanisms for recurrent ALTE. In a recent study (submitted for publication) ALTE in four of 109 patients presenting with recurrent episodes were due to suffocation and seven of 109 involved the fabrication of data. In addition, in a prospective study involving the confirmation by third parties of the histories given by the parents of infants with recurrent ALTE proved to be due to natural mechanisms, it is usual for a proportion to begin in the presence of other observers (data under collection).

We receive between one and five patients a week for the investigation of ALTE from all over the UK and have almost daily experience in the interpretation of physiological recordings

during ALTE. Morley *et al* offer no such experience in their letter, in presentations, or in published papers. They offer no suggestions as to how imposed upper airway obstruction should be diagnosed, if not as suggested in our paper (see abstract for summary). We do not use physiological recordings alone as evidence for this form of child abuse. We use them as evidence which is objective. We combine the physiological data with all of the other clinical history, including validation of the observation of the onset of ALTE, and use this information to justify CVS. We will only go to a child protection case conference without video evidence if the latter is impossible to obtain. If CVS is prevented or fails, we will present physiological recordings to the court as evidence in context with all the other data, if there is agreement by a multi-disciplinary child protection group that imposed upper airway obstruction is the probable mechanism for recurrent hypoxaemic episodes.

Our increasing experience with physiological recordings during imposed upper airway obstruction and during other 'natural' disorders causing ALTE will be published when it is ready for peer review. In the meantime, it would be much better if Morley *et al* collected data on recurrent ALTE so that they could argue convincingly with our approach. In the absence of data, their 'beliefs' could inhibit paediatricians and the court from identifying this dangerous form of child abuse.

#### Vulvovaginitis

SIR,—I was interested in Pierce and Hart's report on this subject which provides important confirmation of the association with poor hygiene and the low incidence of urinary tract infection.<sup>1</sup> I was disappointed, however, not to see discussion of the use of topical oestrogen in this situation. Dewhurst in his monograph states authoritatively that 'for the majority of patients with a discharge due to low-grade bacterial infection the most satisfactory treatment is local oestrogens'.<sup>2</sup> I have always found this advice useful in my own practice.

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1 Pierce AM, Hart CA. Vulvovaginitis: causes and management. *Arch Dis Child* 1992;67:509–12.

2 Dewhurst CJ. *Practical pediatric and adolescent gynecology*. New York: Marcel Dekker, 1980:87.

#### Dr Pierce comments:

In the series we used topical oestrogens routinely in the treatment of labial adhesions. In the early part of the study we also used it in some cases of vulvovaginitis but now rarely do so. We found that treatment of a triggering factor such as threadworms, bacterial infection or constipation, coupled with strict attention to hygiene was more effective. In addition we found that the oestrogens sometimes increased the redness and irritation, and often the vulvovaginitis recurred after the treatment was stopped. This led to concerns that, in spite of instructions to the contrary, the cream would continue to be used with the dangers of absorption of oestrogens.