Archives of Disease in Childhood, 1984, **59**, 665–677

Short reports

Overturning the diagnosis of child abuse

R K OATES

Royal Alexandra Hospital for Children, Camperdown, Australia

SUMMARY Three cases, one of bullous impetigo, one of a Mongolian spot, and one of constriction of the toe by a hair, were mistakenly diagnosed as cases of child abuse. The diagnosis of child abuse is not usually simple and requires a careful evaluation of the injuries and the family if cases are not to be either overlooked or overdiagnosed.

The diagnosis of child abuse is rarely a black and white issue. Most cases fall into the grey area and a judgement has to be made based on the pattern of injury, the degree of consistency between the injuries observed, the explanation given, and the characteristics of the parents. After a period of lack of awareness of child abuse up to the 1960s there is now widespread knowledge of the condition among many, but not all, medical practitioners, paramedical groups, and members of other professions. It has been suggested[1] that the pendulum of suspicion has at times swung a little too far, perhaps over compensating for former tardiness in recognising the syndrome. This report describes three cases referred as child abuse where the initial diagnosis was incorrect.

Case reports

Case 1. A four year old child was referred from a country hospital with a diagnosis of child abuse because a lesion, said to be a cigarette burn, had been found on the anterior aspect of his forearm. Examination showed a circular lesion of diameter 1 cm which had a raw surface and ragged edge. There was a slight discharge of serous fluid. Further examination showed a slightly smaller, similar lesion on the anterior aspect of the upper arm. When the child's arm was flexed at the elbow, these two lesions came into direct contact with each other, suggesting an infective cause with the lesion spreading to the upper arm as a result of contact during elbow flexion. Examination of a sibling showed several similar lesions in other parts of the body. Both children were then treated for bullous impetigo.

Case 2. A phone call was received from a social worker in a country town to say that she had notified the statutory authority of a case of child abuse in which a 2 year old part-aboriginal child was found to have extensive bruising on the back and buttocks. As the child had been seen in an outpatient clinic of the Royal Alexandra Hospital for Children two weeks earlier with a respiratory infection, the social worker had telephoned the hospital to see if any evidence of abuse or neglect had been noted on that occasion. A review of the outpatient notes showed that the child had been noted to have an extensive Mongolian spot on the back and buttocks precisely in the area where the 'bruising', which had led to the recent diagnosis of child abuse, had been found.

Case 3. A 6 week old baby was admitted to hospital from the casualty department with a diagnosis of suspected child abuse. The parents were young, unmarried, and unable to explain the two lesions on the child's foot. The terminal digits of the second and fourth left toes were swollen, engorged, and purple. Proximal to these swollen areas was a tight constriction. Closer examination showed that the constriction had been caused by hairs which had tightly wound around the toes. It was recalled that similar lesions had been reported[2] due to threads from nylon mittens becoming wound around fingers. Inspection of the baby's bootees showed a strand of hair inside one of them. The hair was removed and the child had an uneventful recovery.

Discussion

These three cases highlight some of the hazards in making a diagnosis of child abuse—particularly when the diagnosis is made by non-medical or inexperienced medical personnel. The diagnosis of child abuse is often difficult to make. The prac-

titioner may have to overcome his own disbelief and reluctance to become involved and is then faced with trying to establish the diagnosis in the face of parents who may be uncooperative or untruthful. Other factors adding to the difficulty in reaching a diagnosis may include a concern about the confidentiality of the doctor-patient relationship on the one hand and some anxiety about potential professional and even public castigation should a case be missed.

There may also be guidelines or statutory requirements which outline the steps necessary for the diagnosis and subsequent registration of child abuse cases. In New South Wales, the 1977 amendment to the Child Welfare Act requires doctors to notify the Department of Youth and Community Services whenever they have reasonable grounds to suspect child abuse. Any member of the public may also make a notification. On receipt of a notification social workers from the department investigate the circumstances of the injury, seeking expert medical advice at times, before deciding whether to register the case. Apart from the mandatory notification for doctors, the United Kingdom guidelines for the registration of child abuse are similar in that they emphasise the requirement for medical and social investigation before the diagnosis may be made.

As well as the standard texts describing the typical injuries of abused children[3] and the characteristics of their parents,[4] some work has been done in finding ways of differentiating accidental from non-accidental injury. Helfer *et al*[5] studied 246 children aged under 5 years who fell out of bed and found that none had sustained serious injury, the implication being that severe injuries which are said to be from falling out of bed should be regarded with suspicion. Roberton *et al*,[6] compared the pattern of bruising in 400 normal children with that found in 84 abused children and showed that the pattern of bruising was different in the two groups, with injuries to the head, face, and lumbar region being much more common in the abused group.

Although this information is useful, the ultimate diagnosis depends on a combination of history, physical findings, evaluation of the parents, and the practitioner's own experience and acumen. Undoubtedly, many instances of child abuse still go unrecognised but these three cases emphasise the important role and responsibility of the paediatrician not only in being aware of the clinical features of child abuse, but also in conducting a careful medical, in addition to a social, investigation of each case.

References

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Correspondence to Dr R K Oates, Royal Alexandra Hospital for Children, Camperdown NSW 2050, Australia.

Received 5 March 1984

Adrenaline and nebulized salbutamol in acute asthma

M TURPEINEN, J KUOKKANEN, AND A BACKMAN

Allergy Hospital and Department of Pediatrics, University Central Hospital of Helsinki, Finland

SUMMARY The effects of injected adrenaline and nebulized salbutamol on acute asthma were compared in 46 children. The results showed that salbutamol had a significantly better bronchodilatory effect than adrenaline. Nebulized salbutamol is recommended as a primary method of treatment of asthmatic attacks in childhood.

Although adrenaline is still frequently used for the treatment of acute asthma in children, the short duration of its bronchodilatory effect and the pain of injection are definite disadvantages. Its use is further restricted by the increased heart rate caused by beta$_1$stimulation. Selective beta$_2$agonists have a good bronchodilatory effect with minimal side effects;[1] the bronchodilatory effect is even greater if the drug is inhaled into the lungs.[2 3] In this study we