

Are neck radiographs necessary in the management of croup syndrome?

Sir,

A total of 115 children (83 boys and 32 girls) with croup syndrome were studied. Of these 110 had infective croup and five acute epiglottitis. The purpose of this study was to ascertain whether neck radiographs have any place in the diagnosis and management of croup syndrome in children. All except five with acute epiglottitis had chest and lateral neck radiographs on admission to hospital. Radiographs of 65 children, as expected, showed either ballooning of the hypopharynx or subglottic narrowing, or both, and no abnormality was found in the remaining 45 patients. The diagnosis of infective croup was mainly based on clinical presentation and acute epiglottitis was diagnosed on laryngoscopy. All children with acute epiglottitis required endotracheal intubation and all those with infective croup recovered with conservative management. Radiological findings of ballooning of the hypopharynx or subglottic narrowing did not help in the management of these children. If there is doubt about the diagnosis direct inspection is the only appropriate method, provided adequate precautions are taken to deal with an emergency. Furthermore, the handling necessary to obtain adequate radiographs of the neck may be very disturbing and may precipitate acute airways obstruction. It seems, therefore, that neck radiographs do not help in the management of croup syndrome in children.

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Danger of egg white treatment for nappy rash

Sir,

We wish to report a possible hazard of a commonly used remedy for nappy rash.

A 6 month old boy, who at the age of 3 weeks had undergone bowel resection and afterwards developed lactose intolerance, was admitted to hospital for a lactose challenge. The challenge was unsuccessful and led to the development of profuse diarrhoea with acid stools. As a result he suffered severe excoriation of the buttocks which failed to respond to several proprietary preparations.

A favourite nursing treatment for nappy rash was then instituted, applying egg white to the affected area and nursing exposed. After two days the baby developed a florid urticarial rash covering his whole body and became generally unwell. The egg white treatment was stopped and within 24 hours the rash had resolved and the baby's condition improved. Serum IgE measured at the time was 183 IU/ml (normal less than 11 IU/ml) and radio allergosorbent testing showed a class three response to egg.

It is well recognised that eggs are highly allergenic and in infants under 1 year of age, are probably the most common cause of urticaria due to ingestion of a food allergen.¹ It is not surprising, therefore, that the application of raw egg white to broken skin should facilitate the development of hypersensitivity to egg, by allowing easy penetration of the allergen through the skin to the circulation.

We therefore question the wisdom of continuing the practice of applying egg white to excoriated buttocks which is so popular among paediatric nurses.

Reference

- ¹ Twarog FJ. Urticaria in childhood: pathogenesis and management. *Pediatr Clin North Am* 1983;30:891.

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Complete recovery after profound acidosis (pH 6.48)

Sir,

Khan *et al* have recently reported the successful resuscitation of a 2½ month old infant with an arterial blood pH of 6.49 due to salicylate poisoning.¹ We report a similar child with profound acidosis, although the duration of acidosis was even shorter in our patient.

A 5 week old Nigerian infant was circumcised by a Mohel for religious reasons. The infant became fretful and during the ensuing night his mother changed three napkins soaked with blood. The Mohel was called to the home and brought the child immediately to this hospital.

On arrival in casualty 10 hours after the circumcision the infant was extremely pale, peripherally cold, shocked, hypotonic, and unresponsive to painful stimuli. His rectal temperature was 36°C, heart rate 90/minute, and blood pressure was unrecordable. He bled excessively from puncture sites but there was no bruising or purpura. An arterial blood gas showed a pH of 6.48, Pco₂ 40 mm Hg, Po₂ 63 mm Hg, HCO₃ 2.7 mmol/l base excess -33 mmol/l, His haemoglobin concentration was 3.2 g/dl, white cell count 18.2 × 10⁹/l, and platelet count 264 × 10⁹/l. A coagulation screen performed concurrently showed a partial thromboplastin time of greater than 140 seconds (control 36.5 seconds), a prothrombin time of 28 seconds (control 13 seconds), a thrombin time of 13.5 seconds (control 10 seconds), and fibrinogen concentration of 1.2 g/l (normal 2 to 4 g/l). The diagnosis of classic haemophilia was subsequently confirmed (factor VIIIc concentration 3%).

He was resuscitated with uncrossmatched (O rhesus negative) blood, plasma, and sodium bicarbonate and five hours after admission his arterial blood gases showed a pH of 7.248, Pco₂ 22.1 mm Hg, HCO₃ 11.6 mmol/l and base

excess -16.1 mmol/l. There was concomitant clinical improvement.

He developed acute renal failure, with biochemical and ultrasonic features suggesting acute tubular necrosis, and required peritoneal dialysis for four days. His only cerebral problems were transient irritability and jitteriness, associated with mild abnormalities on electroencephalogram, but normal cerebral ultrasound. At follow up six weeks later he was thriving, he had no focal neurological signs, and tone and head control were normal. He was normotensive and had a normal serum creatinine ($58 \mu\text{mol/l}$).

This case further illustrates the remarkable capacity of

the infant brain to withstand extreme acidosis and the importance of vigorous resuscitation in such cases.

Reference

- ¹ Khan MI, Miller MT, Bartlett M. Complete recovery after profound acidosis (pH 6.49). *Arch Dis Child* 1984;**59**:573-4.

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