Fatal airway obstruction in infectious mononucleosis

P CARRINGTON, J I HALL

We report a case of fatal airway obstruction due to tonsillar enlargement in infectious mononucleosis.

Case report

A 20 year old man was brought to the casualty department having collapsed at home. The ambulance crew reported that he had suffered a cardiac arrest and since then had had no spontaneous respiration. He was being hand ventilated on arrival at hospital. On examination there was a good cardiac output but no spontaneous movements and both pupils were fixed and dilated. Examination of the mouth showed massive enlargement of the tonsils, which met in the midline. They were covered with a firm exudate, and a large amount of saliva was present. He was intubated with difficulty and established on a ventilator.

Further information was obtained from the patient’s father and general practitioner. One week previously he had developed a sore throat and general malaise. Infectious mononucleosis had been diagnosed clinically, and a Paul-Bunnell test yielded positive results. Over the three days before admission he developed dysphagia and stridor. On the night of admission his general practitioner was called to the house; he prescribed oral prednisolone and advised that he be recalled should the patient’s condition deteriorate. In the subsequent six hours the stridor increased and the patient became confused until his eventual collapse. He was cyanosed and made no respiratory effort. The family attempted resuscitation until the general practitioner and ambulance arrived. At this stage there was no cardiac output; intracardiac adrenaline was given, and he was transferred to hospital. On arrival he had no apparent signs of brain stem function. Formal testing was subsequently carried out before artificial ventilation was stopped next day.

On admission a chest x-ray film and electrocardiogram were normal, white cell count was 22.5 x 10⁹/l (25% atypical monocytes), aspartate transaminase activity was 377 IU/l (normal range 10-40 IU/l), and bilirubin concentration was 11 μmol/l (0-6 mg/100 ml). Necropsy confirmed gross enlargement of the pharyngeal lymphoid tissue that virtually occluded the upper airway.

Discussion

Tonsillar enlargement is common in infectious mononucleosis but causes appreciable obstruction of the airway in only a few cases. Even when obstruction is present it usually responds to conservative treatment with intravenous fluids and high doses of corticosteroids. More severe obstruction requires definitive treatment to restore the patency of the airway. Three deaths from airway obstruction in infectious mononucleosis have been recorded, only one of which occurred in the past 35 years.

In the present survey of 467 patients with infectious mononucleosis admitted to hospital “potentially lethal” airway obstruction occurred in five, in three of whom it settled with conservative management. For the other two patients who did not respond to intravenous fluids and steroids several methods of treatment have been advocated. Tracheostomy would seem to be the logical answer as the tonsillar enlargement is usually self-limiting. This was first described in 1949, and there have been several recent reports of patients successfully treated in this way. The procedure may, however, be difficult and is not without hazard as the obstruction invariably increases as soon as the patient lies down; the distress and hypoxia in such a patient may be necessary.

“Hot” tonsillectomy is an alternative first proposed in 1959 and reported more recently. This has the advantage of leaving no scar but carries the risks of a general anaesthetic and of potentially severe haemorrhage. Moreover, peroral intubation before the procedure may prove impossible, resulting in the need for tracheostomy anyway. Because of the potential risks of both the above procedures use of a soft nasopharyngeal airway together with intravenous fluids and steroids has been proposed as a safe and reasonable way of treating airway obstruction in children with infectious mononucleosis.

Whatever the preferred treatment the lesson is clear and was recently stated by Johnsen et al: “patients with even slight respiratory embarrassment in infectious mononucleosis should be observed and treated in an ENT department.”

We thank Mrs Jean Glover and Mrs Gill Newall for their help in preparing this report.

References


(Accepted 3 October 1985)