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Adult floppy epiglottis: a simple surgical remedy

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Abstract
Epiglottic prolapse during inspiration is an unusual cause of upper airway obstruction. We present a case of a previously fit, 73-year-old, male with upper airway obstruction secondary to a floppy epiglottis. We describe a simple method of treatment without the need for partial or total excision of the epiglottis or tracheostomy.

Key words: Epiglottis, surgery

Introduction

Supraglottic airway collapse is well recognized in children; laryngomalacia being the commonest cause of stridor in infants.

In adults it has only rarely been described and is then usually associated with neurological defects. Templer *et al.* (1981) described a case in an 18-year-old adult. Further papers have reported cases of redundant aryepiglottic folds as a cause of stridor (Peron *et al.*, 1988; Kletzker and Bastian, 1990). Most cases of this so-called 'acquired' laryngomalacia have been treated initially by tracheostomy or have been diagnosed after failed attempts at decannulation.

Case report

A 73-year-old, previously fit, Caucasian male was referred to our department with a lifelong history of 'choking fits'. These could occur at any time during the day and used to wake him at night. A typical attack would be started by a non-specific factor such as coughing and would consist of a musical stridor with virtually no movement of air on inspiration. Eventually the attack would cease, the stridor reduce and the breathing return to normal. At night his wife would at times have to 'slap' him in order to break the attack. There was no history of neurological disease and previous ENT investigations had failed to illicit any abnormality.

Clinical examination was normal other than the presence of a large epiglottis on mirror examination.

When fibreoptic nasendoscopy was performed however it was possible to see that this epiglottis was abnormally floppy. It vibrated on gentle inspiration and on 'forced' inspiration would flop over and completely occlude the laryngeal inlet. The sensation this produced was recognized by the patient as being identical to his attacks. Barium swallow was normal.

In view of this finding it was decided to try and fix the epiglottis back to the tongue endoscopically under a general anaesthetic. The mucosa from both ventral and dorsal aspects of the vallecula was denuded and the epiglottis sewn with a vicryl suture. Diathermy was then applied to the lateral edges of the epiglottis and to the aryepiglottic folds in an attempt to produce scarring.

An immediate post-operative improvement was noticed and the patient discharged home 48 hours post-operatively. Eighteen months later there had been no recurrence of the symptoms and both the patient and his wife were delighted with the result.

Discussion

Our patient had had lifelong intermittent laryngeal obstruction which had avoided detection previously. Although laryngeal obstruction is well recognized in children and termed laryngomalacia, the condition is not well recognized in adults. A review of the published literature has revealed that the adult floppy epiglottis is not well reported. The case we describe and those previously described (Templer *et al.*, 1981; Woo, 1992) have been shown to have posterior folding or prolapse of the epiglottis as the cause of airway obstruction.

Our patient had previously been well, with no evidence of neurological disease. In the majority of cases reported in the literature the patients have been far from well. Woo (1992) described eight cases of epiglottic prolapse – in all but two of which they were in patients recovering from head injury or coma. These patients were noticed because of difficulty with decannulation following tracheostomy. The two other cases included a patient who had previously undergone a resection of the floor of the mouth for oral cancer and one patient who had suffered a laryngeal fracture.

Templer *et al.* (1981) described a case of an 18-year-old Caucasian male with a lifelong history of dyspnoea. He was found to have a combination of a small floppy epiglottis, redundant aryepiglottic folds and enlarged accessory cartilages. They were unable to treat this patient without recourse to tracheostomy although this was successfully closed at a later date.

We found the use of the fibreoptic nasendoscope invaluable for diagnosing our patient's problem. On deep inspiration the large floppy epiglottis was actually seen to obstruct the laryngeal inlet. Previous reports have described the use of video-laryngoscopy. We do not have

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such equipment in our department but feel that simple nasendoscopy proved a perfectly acceptable alternative.

It is interesting to note that epiglottic anomalies are frequently associated with other anomalies, especially those involving the digits of the hand, but we found no associated anomalies in our case. Keleman (1953) classified the causes of congenital laryngeal stridor and described the larynges of four infants who died from this syndrome. He included a small flaccid epiglottis and redundant aryepiglottic folds in his classification. In our case the patient had a large 'spade-like' epiglottis.

We hope that in future the recognition and treatment of this relatively rare condition will be improved.

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