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The Red Herrings and Confounders in Airway Foreign Bodies – Lessons learnt.

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Abstract

Foreign bodies present themselves in various masquerades. A high index of suspicion and a proactive approach are required. In every journal and in every ENT academic conference, you will find anecdotal references to individual experiences. Such anecdotes give valuable lessons to the other ENT surgeons. We learn, by precept, how a particular surgeon surmounted a particular difficulty. This knowledge will bail you out, in a distant time of your life, when you get a similar patient.

Case Reports

Three clinical vignettes met by the two authors, both of whom are senior Otolaryngologists, are described below. The lessons learnt from each case are discussed. They amply illustrate the several pearls of wisdom.

Episode 1 – A Red Herring - Oedema caused by a FB was mistaken to be Angio oedema:

An eighteen month old child (HB) had taken some fish on the evening of a rainy day. By ten o'clock that night, he developed difficulty in breathing and a diagnosis of hypersensitivity was made and the child was admitted, in a

corporate hospital in Chennai. Even after seven days of appropriate treatment, the child did not improve. On the seventh day, the dyspnoea and respiratory obstruction became very severe. A fibre optic bronchoscopy was done to clear the secretions. The larynx was found to be grossly oedematous and a tiny end of a fish bone was seen buried among the oedema. The child was referred to the authors.

Within the hour, a rigid bronchoscopy was done. The anaesthsiologist administered general anaesthesia with skeletal muscle paralysis and maintained the oxygenation by Sander's jet ventilation method. The foreign body was found in the sub-glottic region and was removed, albeit, with some difficulty. Thus, a tracheostomy was avoided. The child started recovering very fast and was sent home in two days.

Fig 1. The sharp foreign body 'fish bone' retrieved from the sub glottis

Child 2 - A forgotten episode of aspiration:

K.A., An eight year old boy (KA) was hospitalized under the care of a paediatrician, with a history of generalized convulsions. He had been having cough, breathlessness and fever during the previous one week. An x-ray [1] of the chest, taken as part of the general work up, showed a collapse of the left lung and hyper ventilation of the right lung. The ENT surgeon's opinion was sought. Immediately, an emergency rigid bronchoscopy was done - which revealed a cylindrical plastic cap of a ball point pen nesting in the left main bronchus. After removal of the same, the child recovered fast and went home in four days.

Fig 2. Obstructive emphysema due to a plastic cap.

The lesson to be learnt from this case is that 'a high index of suspicion [2] should be harbored always'. We should never be misled by the age of the child. Initially, no history of aspiration was forthcoming. However, after retrieval, the child admitted that he used to habitually keep pen caps in his mouth and that ten days earlier, once it had slipped inside. At that time, he had only some transient coughing episode and had no further distress and had promptly forgotten the episode.

Child 3 – Irritant foreign bodies presenting with retained secretions:

A ten month old child (DK), was admitted, with a diagnosis of pneumonitis and breathlessness since two days. The chest x-ray showed patchy areas in both the lungs. On the request of the attending paediatrician, a rigid bronchoscopy was done to clear the secretions. Copious secretions were found. The same patiently suctioned off. In the right main bronchus, a dark matter was found. On suctioning it was found to be a broken kernel of black pepper. A few days after removal of this foreign body, the pneumonitis cleared promptly. Closer questioning of the family members revealed that the elder sibling, aged two years, had solicitously fed the infant with a snack three days earlier. This snack obviously had a kernel of black pepper.

Such irritant foreign bodies may present in any of the caverns of the ENT region. A notorious example is the 'Button cell', used ubiquitously nowadays, in watches and in toys. This cell is also called Silver cell or

Lithium cell and contains Silver oxide and Lithium or Zinc. Once the seal is corroded by the body fluids, it leaks the contents, which are great irritants. The senior author recollects one such button cell inside the nasal cavity of a three year old boy. It had remained unrecognized until it caused profuse granulations. The 'growth' had spread into the orbit also, and the child was in great pain. Two different well-experienced paediatric surgeons had been entertaining a diagnosis of a poorly differentiated malignancy. In fact, the ENT surgeon was called to take a tissue biopsy only. During that attempt with a nasal endoscope, under general anesthesia, a button cell was fortuously divined and removed. The granulations resolved rapidly. The child went home in a few days, to the great relief of all. This particular patient happened to be the son of a popular actor and even after several years, the senior author still gets priority admission passes for cinema premieres.

Take home Message:

The lessons to be learnt from the above episodes are many.

(1)The parents may not come forth with a proper history. Red herrings might present themselves and mislead you. You must always have a high index of suspicion

(2) Never hesitate to do a bronchoscopy

(3) Equip yourself with the necessary skills for bronchoscopy. Additionally, convince the anesthesiologist in your team, to get trained in the Sander's jet ventilation technique [3] and the spontaneous breathing technique.

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