ASYMPTOMATIC IMPACTED FOREIGN BODY OF LARYNX

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ABSTRACT : *A rare case of asymptomatic impacted foreign body (coin) of larynx is reported*

Key Words : *Foreign Body, Coin, Larynx, Asymptomatic*

CASE REPORT

A male patient aged 25 years presented to us with the history of swallowing of one rupee coin while playing with his kids, keeping the coin in the mouth.

On inquiring, there was no history of choking, coughing, respiratory distress and dysphagia. There was uneasiness and slight pain in the throat. On examination patient was a young, healthy man of average built. There was no cyanosis, no excessive salivation. General physical examination did not reveal any abnormality. Chest, on auscultation showed normal air entry.

Patient was sent for X-ray chest PA view and soft tissue neck. AP and lateral view. To our surprise it showed a rounded foreign body (coin) occupying the glottic region in the lateral view of the neck (Fig. I).

He was then immediately taken to operation theatre for foreign body removal. General anaesthesia was given keeping the tracheostomy set and bronchoscope ready. Intubation was not performed. Direct laryngoscopy was done and foreign body (coin) was seen lying vertically in between the two vocal cords in sagittal plane, which was then removed (Fig. II).

Literature Review :

In most cases of inhaled foreign bodies there is a definite history of choking followed by paroxysmal coughing which then subsides.

In Rothman and Boeckman's series (1980) a positive history of foreign body aspiration was obtained in 85% cases while in 15% of cases, it was obtained retrospectively after its removal.

After the initial paroxysm of coughing, the tracheobronchial mucosa becomes tolerant to foreign body

and coughing ceases. This causes delay in diagnosis (Rothman & Boeckman 1980);

In the same series, 18% of cases were diagnosed in a week and 8% in a month after the event. In Cohen's series 50% of the cases were recognised and treated within 24 hours and by 10 days 74% of the cases had been treated. 26% of the cases being diagnosed between 10 days and one month.

In a series of 51 cases of foreign bodies reported by Ross and McCormick (1980) there was no history aspiration in 8% cases. One symptom of triad-cough, choking and wheeze was present in 91% of patients with foreign body aspiration (Black et al 1984)

Boys are likely to inhale foreign bodies more than girls, 2:1 (Rothman & Boeckman). This has been observed by various authors like Brown & Clark (1983). O'Neill, Holcomb and Neblett ; (1983); Schloss Pham – Dang and Rosales (1983) etc.

The maximum incidence of inhalation of foreign body

Fig. I. F.B. (Coin) in Larynx in soft tissue neck x-ray Lateral view.

Fig. II. Photograph of Coin (Indian) which was removed.

occurs between the age of 1 & 3 years. 74% of 115 patients (Brown & Clark 1983) & 77% of 225 patients (Rothman & Boeckman, 1980), 74% in a much larger series (Jackson & Jackson 1936), Holinger (1962) found that children under 4 years age constituted 55% of their series of foreign bodies, but their cases included adults.

A minority of these objects impact in the larynx. 4% in Cohen's series were removed from the larynx. Foreign bodies lodge in the larynx if they are too large to pass through or if they are of an irregular shape or have sharp edges which often catch on the laryngeal mucosa. Egg shells, glass fragments, plastic are not infrequent offenders. (J. N. G. Evans).

DISCUSSION

Coin as a foreign body in oesophagus is very common but in an airway, laryngobronchial tree, it is very uncommon.

Here the patient is a young 25 years old male. This case needs to be discussed for not having any laryngeal symptoms like choking, cough etc. before it was impacted in the larynx. Presumably, it had entered through a wide open larynx at the moment of a violent inspiration during the peak of excitement. It must have also choked him momentarily but he presumably could not recall it afterwards. But asymptomatic foreign bodies of respiratory tract is not an unknown entity as shown in the literature review.

The majority of foreign bodies pass through the glottis

into the trachea and main bronchus so that the larynx is not a common site of their lodgement. The foreign body with sticky quality or thorny foreign body may get lodged in the larynx (Soni & Chatterjee 1978).

Any foreign body in the larynx presents usually as a respiratory emergency. The initial symptoms like choking and gagging may pass unnoticed especially if the child is alone at the time of foreign body inhalation.

The Rima glottidis being the narrowest part of the larynx tries to change the line of foreign body in the anteroposterior direction (Bhatia et al).

In a case report by Withers (1949) a Dime (American coin) was removed from the vestibule of the larynx producing hoarseness.

When a foreign body tries to pass down the vocal cords; spasm & forced expiratory coughing forces the foreign body to be in the supraglottic region. If coughing is forceful, it may expell the foreign body out of larynx. On the otherhand if the expiratory coughing is weak & the resistance offered by the aryepiglottic fold is enough, the foreign body is held up in the vestibule of the larynx.

An infinite variety of objects may be accidentally inhaled by children. The children unaware of the inhalation danger are in a habit to put many objects in the month, which may be vegetable, nonvegetable, metallic or non-metallic. It is this habit of keeping such objects in the mouth and carelessness, such as crying, laughing, talking while eating, that these objects may be inhaled or swallowed. Often smaller foreign bodies are coughed out due to protective cough reflex of larynx. But occasionally, they are unable to be coughed out and are retained and get impacted at some plaaces in laryngotracheobronchial tree.

The diagnosis of such a case at times becomes difficult because of non-availability of a positive foreign body history, due to unawareness on the part of children, forgetfullness of such an accident or out of sheer fear the child will not disclose such an accident. Lack of clinical features and absence of radiological features may also aid to the difficulty in diagnosis.

Modern techniques of endoscopic removal of bronchial foreign bodies stem from advances made in the early part of the century by Chevalier Jackson who reduced the

mortality of removal of foreign body from over 20% to approximately 2%. He achieved a 98% success rate of bronchoscopic removal of F.B.

Since then, improvement in the illumination provided by the Hopkins rod lens system and the advent of the ventilating bronchoscope (Hopkins 1976) coupled with the advances in anaesthesia have further reduced the mortality and greatly facilitated the task of endoscopist (Tucker 1985). Most paediatric endoscopists use these instruments and perform the removal of foreign body under general anaesthesia (Gans & Bercl, 1971).

CONCLUSION

The most common cause of accidental death in the home in children under 6 years of age is the inhalation of foreign body (National Safety Council of America, 1980). It is estimated that almost 600 children under 15 years age die each year in the U.S.A. from asphyxia following the aspiration or ingestion of large foreign bodies. The peak incidence of inhalation of foreign bodies in early childhood is ofcourse related to the fact that children have a habit of putting objects into the mouth to determine their texture and taste and to chew on when teething. It is extremely important, therefore, where possible to keep objects which might be inhaled out of reach of small children.

The vast majority of cases of inhaled or ingested foreign bodies occur as a result of carelessness either in the preparation or ingestion of food or drinks or as a result of placing inedible or unsuitable objects in the mouth. The accidental inhalation or ingestion of foreign bodies is therefore almost entirely preventable. Infants & children under the age of 2 years should not be allowed to eat peanuts and their play areas should be cleared of small

objects that could be inhaled. Adults should set a good example by never placing pins, coins in their mouths.

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