CASE REPORT

Impacted fish bone in the larynx masquerading as laryngeal papillomatosis: Report of a rare case

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Abstract The diagnosis of either impacted fish bone in laryngopharynx or laryngeal papillomatosis on their own may not be uncommon for otolaryngologists. We report a rare case of impacted fish bone in the larynx that was first treated as suspected laryngeal papillomatosis based on direct laryngoscopy and histopathological findings. However, during endoscopic laryngeal microsurgery with microdebrider, we found a fish bone embedded in the substance of polypoidal mass that was located at the left posterior commissure. We believe that the fish bone was likely a migration from left hypopharyngeal area from fish bone ingestion 2 years ago, causing a polypoidal lesion. The patient’s chief complaint of hoarseness resolved after the removal of impacted fish bone and debridement of the lesion.

1. Introduction

Foreign body ingestion is a commonly seen otorhinolaryngology case in the outpatient clinic. In the adults, the commonest foreign body is usually organic in nature like fish bone while the pediatric age group patients tend to ingest inorganic foreign body like coins more often. Laryngeal papillomatosis is another different disease, caused by Human Papillomavirus (HPV), mainly HPV-6 and HPV-11 serotypes and is linked with sexual promiscuity and oral sex. Laryngeal papillomatosis or recurrent respiratory papillomatosis (RRP) is benign and usually characterized by exophytic, wart-like lesions of the upper airway that tend to recur. We report an interesting case of impacted fish bone in larynx that presented as laryngeal papillomatosis and discuss the possible connections between these two polar entities.

2. Case report

A 62 year old woman with underlying hypertension and adult onset bronchial asthma presented with complaints of hoarseness of voice and chronic cough for the past 2 years. She was
admitted to the medical ward twice, investigated for pulmonary tuberculosis which was negative and therefore treated as pneumonia. She was able to eat normal diet with no history of foreign body ingestion, dysphagia, odynophagia, loss of appetite or loss of weight. She denied shortness of breath, noisy breathing and orthopnea. She is a housewife with no history of tuberculosis contact, smoking or sexual promiscuity. General examination including lungs, heart and abdomen were normal. ENT examinations were also normal. However during flexible nasopharyngolaryngoscopy noted fungating mass over the posterior commissure. Vallecula, pyriform fossa and epiglottis were normal. Vocal cords were partially seen and we were unable to assess the vocal cord mobility properly due to poor vision secondary to that fungating mass (see Fig. 1).

Routine blood investigations such as full blood count, renal profile, liver function test and random blood sugar was within normal limits. Chest X-ray was clear. Tuberculosis workout including sputum acid-fast bacilli direct smear, culture and polymerase chain reaction, erythrocyte sedimentation rate and Mantoux test were all not suggestive of tuberculosis.

Patient was then scheduled for direct laryngoscopy with biopsies. Intraoperatively, noted firm polypoidal mass, localized only at glottic level, obscuring the posterior commissure. Epiglottis, bilateral pyriform fossa, bilateral true and false cords were not involved. Multiple biopsies were taken from the fungating mass. Under the microscope, the biopsies showed acanthosis, moderate spongiosis, focal parakeratosis of squamous epithelium with focal koilocytosis. It was concluded to be respiratory papillomatosis by the pathologist.

Few days later she underwent endoscopic laryngeal microsurgery (ELMS) with microdebrider. Intraoperatively, there was a firm polypoidal mass over posterior commissure, more over the left side, extending inferiorly to subglottic region below the left true cord. During the process of debulking with cold instrument and shaver, we found a fish bone embedded within the substance of polypoidal mass. The polypoidal mass with fish bone was completely removed (see Figs. 2-4).

Post operation, during ward round, patient disclosed a vague memory of mild choking sensation after a fish meal 2 years ago. She sought treatment in a local clinic 2 years ago but was discharged with medication after a normal looking neck Xray without referral to the otolaryngologist. As time passed by, her choking sensation disappeared.

This patient was discharged well from ward and seen in the ENT clinic 2 weeks after operation. Her voice quality improved tremendously and no more coughing sensation. As of now, 6 months after ELMS, patient is well with her usual voice with no signs of recurrence.

3. Discussion

Foreign body ingestion, especially organic in nature such as fish bone into the laryngopharynx is a common presentation to the emergency department and otolaryngology clinic. These cases can be managed easily without any complications, provided that the foreign body can be seen and removed in total.1
Depending on the type, size and shape of the foreign body, there is a possibility that the ingested foreign body can be passed out spontaneously through the gastrointestinal tract.\(^3\) Out of the 1088 cases of ingested foreign body of upper gastrointestinal tract that underwent endoscopic management in China, most of the foreign bodies, about 53% were reported to be lodged in esophagus.\(^3\) Most of fish bones are commonly found to be impacted at the cricopharyngeus level.\(^4\) In poorly managed foreign body ingestion cases, it may lead to potential catastrophic complications such as perforation and migration of foreign body causing mediastinal or vascular complications, neck abscess and pulmonary complications.\(^4,5\) Migration of foreign body is usually fish bone that has linear and sharp pointy edge.\(^6\) In our case, the fish bone was likely to be lodged at the left hypopharynx area since 2 years ago and migrated to the left posterior commissure just below the left true cord causing her to develop chronic cough and hoarseness. It may be due to the shape and positioning of the fish bone. The fishbone was T-shaped, with one very sharp end, a long linear handle and curvy body with sharp edges over the top and bottom of the body. The fish bone was found with the sharpest edge pointing anteriorly toward the thyroid cartilage, probably indicating that the point of entry was formed by penetration from the sharpest point of the fish bone coupled with rear mechanical forces on the curvy part of the fish bone from peristaltic movement. With the fish bone lodged in the larynx, it may have triggered a foreign body reaction causing the formation of polypoidal mass that was mistaken as laryngeal papillomatosis as in our case, instead of the usual etiology of laryngeal papillomatosis which is always associated with HPV virus, vertical transmission through vaginal delivery or sexual promiscuity and oral sex.\(^7\)

4. Conclusion

Migration of ingested fish bone from the hypopharynx to larynx that caused a formation of polypoidal lesion which led to chronic cough and hoarseness is indeed a rare complication that is difficult to diagnose. However, early referral for suspicious and symptomatic cases of foreign body ingestion to the ENT team is essential despite a normal neck Xray. This is to avoid delay in management that may lead to life threatening complications from migration of the foreign body.

References