Elongated styloidy process: A rare cause of dysphagia

Elongated styloidy process is a very rare cause of dysphagia and may pose a diagnostic puzzle to the otolaryngologist. It should be considered in the evaluation and management of patients with chronic head and neck pains. We present here the case of a 28 year old lady who suffered from right chronic sore throat for many years and was eventually diagnosed to have an elongated styloidy process. The clinical presentation and management of this condition is discussed.

The styloidy process is developed from the cranial end of the cartilage of the second visceral arch (Reichert's cartilage). Elongation of the styloidy process is uncommon; it occurs in approximately 4% of the population and seldom produces symptoms. However, as reported in this case, pain on swallowing, which is rare, otalgia, pulsatile tinnitus, glossopharyngeal neuralgia etc may result from elongation of the styloidy process. A high index of suspicion is an aid to diagnosis. In a patient with throat pain due to elongated styloidy process, palpation of the styloidy process deep to the tonsillar bed will make the patient jump. Plain x-ray may be enough to demonstrate this anomaly but in some other cases tomography or CT Scan and MRI may be necessary.

A 28 year old Indian lady presented in our clinic with a 2 year history of right sided sore throat and occasional odynophagia. The pain was referred to the right ear. This was not associated with fever and not relieved by antibiotics. She had visited many clinics without any cure and was told that her problem was of the "mind". Clinical examination showed no abnormalities of the tonsils, pharynx, ears and nose.

Suspecting that an elongated styloidy process might be accountable for her symptoms, the right tonsillar bed was palpated with gloved fingers. The tip of the styloidy process was felt and this made the patient to feel pain. The same procedure repeated on the left side caused no pain to the patient neither did we feel the styloidy process. The diagnosis of an elongated styloidy process was confirmed by a lateral plain x-ray of the skull (Figure 1).

The patient was admitted as a cold case and after routine blood and urine tests, via an intra-oral approach, about 2 cm of the styloidy process was excised. The patient was commenced on intravenous antibiotics postoperatively and had an uneventful recovery. She was followed up for 6 months and was relieved of her symptoms.

The styloidy process is one of the derivatives of the second branchial arch cartilage - Reichert's cartilage. It is a slender bony projection from the inferior aspect of the temporal bone, medial to the stylomastoid foramen. Although the average length is about 3.27 cm, the styloidy process can be as short as 1.5 cm in some patients and as long as 5 cm in others. The superior constrictor muscle along with the pharyngobasilar fascia separates the tip from the tonsillar fossa. During the complex swallowing movements, an elongated styloidy process impinges on this muscle and causes a sharp pain on swallowing, as our patient presented. Previous workers had reported other clinical presentations of elongated styloidy process in form of otalgia, palpable neck lumps, glossopharyngeal neuralgia, carotidynia with or without tinnitus, Eagle's syndrome, dysphonia, and globus pharyngeus.

Elongation of the styloidy process occurs in approximately 4% of the population but seldom produces symptoms. Loeser & Cardwell suggested that the presence or absence of clinical symptoms may be as a result of the variation in the shape of the jaw and the length and position of the lateral process of the atlas in relation to the long styloidy process. Diagnosis of the condition needs a high index of suspicion. Our patient went from one consulting clinic to another with sore throat but because no local cause could be found responsible for her symptoms, she was labeled neurotic.

In a suspected case, the diagnosis can be carried out by palpation of the styloidy process tip deep to the tonsillar fossa. However, this may sometimes be difficult due to tenderness or the size of the tonsil. A lateral x-ray of the skull confirms the diagnosis but sometimes tomography, CT Scan or MRI of the area.

Figure 1 - Diagnosis of an elongated styloidy process
Clinical Notes

may be necessary.

The definitive management of this condition is surgical amputation of the process. This can be carried out by an internal or external approach. We employed the intra-oral approach in this case as it involves simply dissecting out the tonsil and feeling the tip of the elongated styloid process in the tonsillar bed. The muscle fibres over the tip of the process were dissected and the elongated styloid process was exposed by extending the incision vertically. The process was then divided by bone cutting forceps. Because of the opening into the deep tissue plane, intravenous broad spectrum antibiotics is mandatory and the patient was kept in the hospital for 1 week.

Eagle, 1948 described simple digital out-fracture of the styloid process tip by pressure exerted on the tonsillar fossa in a conscious patient. This method is unreliable and may be dangerous. It has also been reported that in some cases spontaneous fracture may occur and pain is relieved.

The incidence of elongated styloid process in the population is as low as 4% and rarely produces symptoms. However, practicing otolaryngologists investigating an unexplained throat pain, ear ache, pulsatile tinnitus, palpable neck lump, dysphonia and globus pharyngeus should keep at the back of their minds an elongated styloid process causing symptoms.

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References


An infant with Sussman syndrome: A rare unclassified chondrodystrophy

The chondrodystrophies are a heterogeneous group of disorders characterized by congenital abnormalities of skeletal development and growth in which basic defect is thought to reside in growth cartilage. Sussman syndrome is rare type of chondrodystrophy. Recently Frenzel et al reported such a case with involvement of the larynx. Two such cases with cardiac failure and respiratory insufficiency have also been described previously. We report an infant with this syndrome, as it has not been reported from this part of the world.

A male infant was referred to the Pediatric Intensive Care Unit (PICU) of Sultan Qaboos University Hospital at the age of one month for evaluation of his tachypnea. There was no history of fever or vomiting. He had been discharged recently from another hospital where he was treated for pneumonia. Birth history revealed history of pulmonary hypertension, diagnosed by echocardiogram carried out for respiratory distress, which had resolved spontaneously. The anthropometric measurements at birth revealed low birth weight (2480 grams, borderline small for gestational age). Length and head circumference were also below the 3rd centile. Family history was unremarkable, with no history of parental consanguinity. Examination at admission to PICU revealed some subtle dysmorphic features with hairy forehead, long eyelashes and slightly deformed chest with active precordium. No stridor was noted. Chest x-ray showed ribs deformity (abnormal oblique position with narrowing of right 6th and 7th intercostal space) and spinal deformity (mild scoliosis to the right) with mal-positioned heart (Figure 1). Lung fields were noted to be normal. An echocardiogram was carried out which confirmed the mal-positioned heart (Apex directed anteriorly), small patent foramen ovale with no other structural abnormalities. Patient's condition deteriorated and he had to be ventilated. He remained ventilatory dependent since then and several attempts of