Case study

Bilateral elongated styloid processes : Case Report with Literature Review

Abstract

Eagle's syndrome,also khown as stylohyoid complex syndrome, is a rare facial pain syndrome characterised by pain orofacial, a sensation of a foreign body in the region of the tonsil lodge with irritation of the ipsilateral lateropharyngeal wall, linked to an abnormal enlargement . Symptoms can be bilateral or, more frequently, unilateral. The incidence is 4-8 per 10,000 people. the clinic is variable and the diagnosis is essentially based on the presence of a syndrome cervico-facial pain, migraine-like, increasing during chewing movements, swallowing and head rotationThe surgical management of the Eagle syndrome consists in the shortening of the elongated styloid process, with the surgical access by intra oral or cervical. We report a case of a 32-years old men admitted to our otorhinolaryngology department with sharp neck pain and a sensation of having a foreign body in the throat.. CT scan with 3D reconstruction revealed bilatéral elongated styloid processes. The patient was treated by excision of styloid processes by intra oral approach.

Keywords: Eagle syndrome; Elongation of the stylohyoid process ; Intra oral surgery

Introduction

An extended styloid process and pain in the cervicofacial area are symptoms of Eagle's syndrome [1]. Around 4% of the population has the condition, the majority of whom are asymptomatic [2]; between 4% and 10% of persons with an extended styloid suffer symptoms [3]. In contrast to men, women are afflicted more frequently, and the average age of patients who come with symptoms is typically 40 years old. This is explained by the fact that as people age, their ligaments and soft tissues lose some of their flexibility, which puts more pressure on the nearby hard tissues [4]. According to research, the typical length of the styloid process is 20-30mm in Caucasians and 15.4-18.8mm in

Asian populations [5]. There are 4 to 8 cases of the presentation out of every 10,000 people. The diagnosis is difficult to establish since it must be distinguished from cranial nerve neuralgias such glossopharyngeal and superior laryngeal neuralgias. Also, choosing between trans cervical surgery and intra oral surgery is a conundrum in and of itself. We describe a 32-year-old man who underwent intraoral surgery in our department to treat classic Eagle's. The patient is still asymptomatic today.

Case Presentation

A 32-year-old man came to our otorhinolaryngology department complaining of severe neck pain and the sense that something alien was in his throat, symptoms that worsened when he swallowed or turned his head to the right side over the previous 10 months. Physical examination revealed no abnormalities in the lymph nodes, neck, thyroid, ear, or sinuses. Results from video laryngoscopy were also typical. A bone mass was palpable in the right tonsillar fossa during an intraoral examination. During palpation, the patient complained of pain. The right styloid process measured 3.7 cm in length and the left styloid process was 3,4 cm, according to computed tomography with 3D reconstruction (Figure 1). Eagle's syndrome was determined to be the cause. Surgery was used to remove the right styloid processes as a possible therapy. Intraoral access was the method of choice (Figures 2,3). The patient had nasotracheal intubation and general anesthesia. The tonsillar pillar region was felt while the patient's mouth was at its widest opening, suggesting where the electrocautery incision should be made. The styloid processes were found after tissue dissection. The most proximal part of the styloid processes were dissected, an extended styloid process was seen and excised, and the incisions were then stitched up using straightforward continuous 4-0 vicryl sutures. Symptoms disappeared right after following surgery. and the patient was fully symptom-free after six months (Figures 1-3)

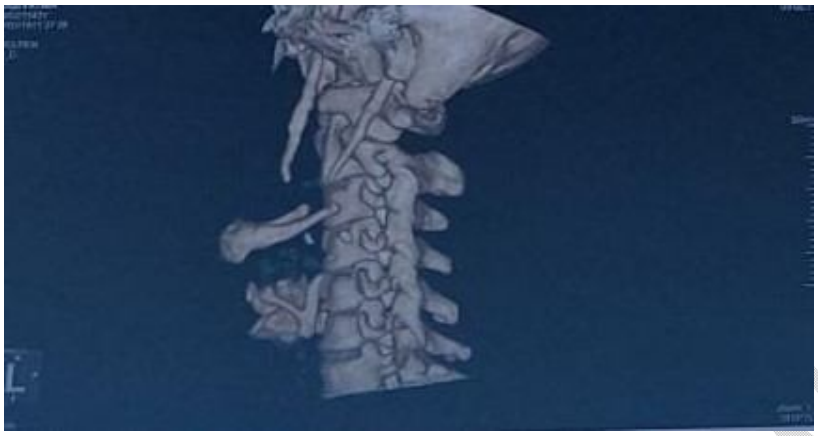

Figure 1 : 3D Ct scan showed bilateral elongated styloid precessess

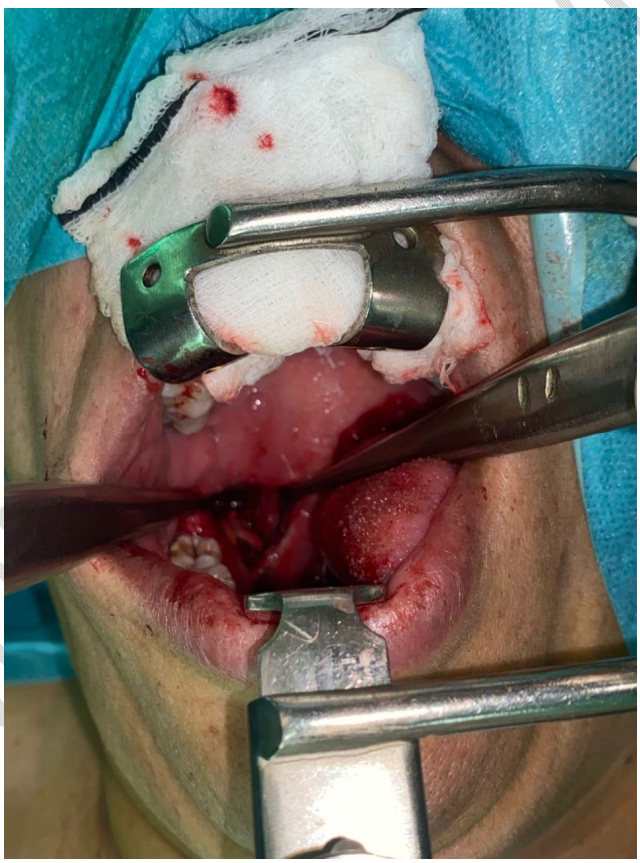

Figure 2: Per operative image of right styloid processes.

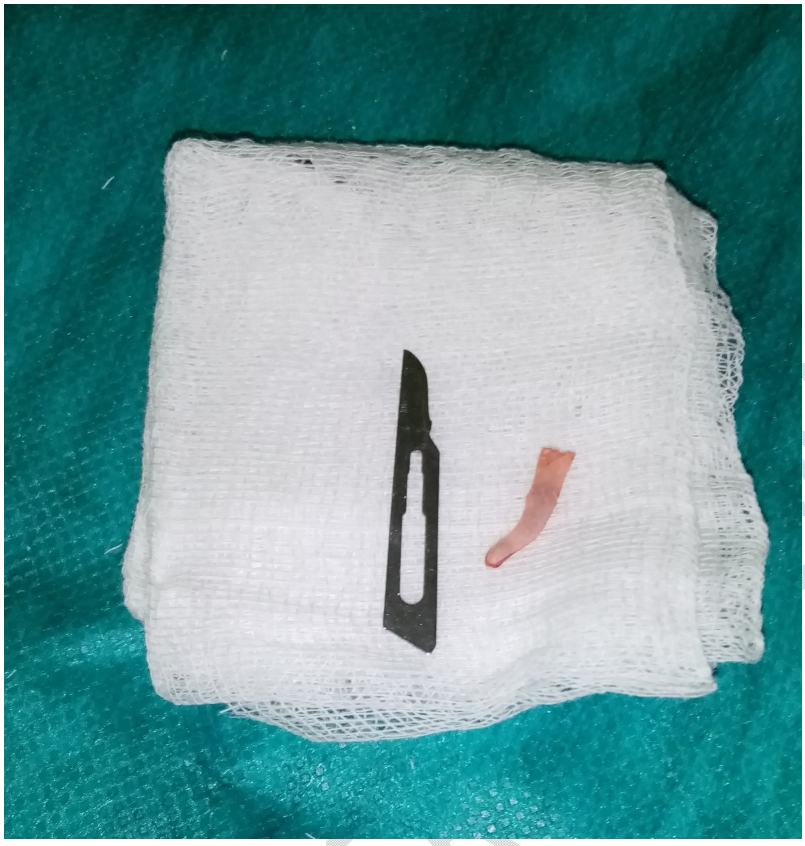

Figure 3: Post operative image of the styloid processes

Discussion

Eagle distinguished between the carotid artery and classic types of the condition. Pain, dysphagia, and a feeling of a foreign body are all symptoms of the initial, classic Eagle syndrome, which appears right after a tonsillectomy. The second condition is stylocarotid syndrome, which is characterized by discomfort (periorbital and parietal), visual abnormalities, and syncope as a result of an extended styloid compressing the carotid artery [5]. The patient in this instance displayed classic signs. A comprehensive physical examination of the head and neck is required as part of the diagnostic process for a patient suspected of having Eagle's syndrome in order to rule out any other potential illnesses. Also, by carefully palpating over the stylohyoid complex, the symptoms can be replicated. When the patient moves their mouth or neck, it will help to localize the pain. The styloid process's tip can be felt as a hard, bony spicule at the level of the tonsillar fossa, which when touched can result in local discomfort and other symptoms [6]. Most doctors now employ three-dimensional CT scans as their preferred radiological examination for the diagnosis since they can precisely evaluate the styloid process' length,

angulation, and calcification [7]. Many possible etiologies have been put up to account for Eagle syndrome. Three scenarios were suggested as potential causes of aberrant stylohyoid complexes. Retained embryologic cartilage tissue from Reichert's cartilage is one of the ideas. The second hypothesis is that the stylomandibular ligament has become calcified. The third theory is that the stylomandibular ligament's origin has expanded osseous tissue. After a physical exam and the results of a CT scan, Eagle syndrome was the primary diagnostic theory in our case. Patients who are unable to have surgery are typically the only ones who receive conservative medicinal treatment for the symptoms of Eagle syndrome, such as anti-inflammatory drugs, anticonvulsants, antipsychotics, or other analgesics [8]. All patients should undergo surgery because it is the only option for treating this illness. Given the patient's age, the deterioration of the symptoms they experienced, and the decisive nature of the operation, the decision to proceed with surgery in this case was made. The surgical treatment for Eagle syndrome consists of reducing the extended styloid process, albeit it is still debatable how to gain access to the area. If a tonsillectomy has never been done before, the palatine tonsil is removed in the first stage of intraoral access. The second stage involves making an incision in the tonsillar bed mucosa and partially resecting the process. Advantages of this method include the potential to avoid a skin infection. However, the treatment carries a high risk of complications because of the limited view of the operating area, which increases the possibility of damaging critical anatomical structures in the parapharyngeal space. Infection of the neck and parapharyngeal region may also occur as a consequence [9]. Surgery offers symptom resolution without the requirement for ongoing medication use [10]

conclusion

The abundance of vague symptoms in eagle syndrome attests to its wide range of clinical manifestations. Understanding the diagnosis process, pertinent imaging, and potential treatments is crucial. The preferred surgical treatment for the styloid process is still intraoral excision.

Consent

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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