Case study

Eagle Syndrome: Case Report with Literature Review

SUMMARY

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

Eagle's syndrome is characterized by an elongated styloid process and pain in the cervicofacial region [1]. The prevalence is about 4% of the population with most of them being asymptomatic [2] and between 4% and 10% of the patients having an elongated styloid experience the symptoms [3]. Women are more frequently affected as compared to men and the average age of the patients presenting with symptoms is usually 40 years. This is attributed to the fact that as age advances, the elasticity of the soft tissues and the associated ligaments is lost, putting increased pressure on the adjoining hard tissues [4]. . The average length of the styloid process has been determined to be 15.4-18.8mm

in Asian population and 20-30mm in Caucasian population [5]. The incidence of the presentation is about 4 to 8 per 10,000 individuals. The establishment of the diagnosis is a challenge in itself as we need to differentiate it from the neuralgias of cranial nerve such as glossopharyngeal neuralgia and superior laryngeal neuralgias. Furthermore, the decision of kind surgical approach; intra oral surgery or trans cervical is another dilemma in itself. We report a case of a 32-year-old men with classic Eagle's treated in our department by intra oral surgery. The patient remained asymptomatic until this day.

Case Presentation

32-year-old man presented to our otorhinolaryngology department with sharp neck pain and a sensation of having a foreign body in the throat aggravated on swallowing or in turning his head to the right side, symptoms that had developed during the ten past months. On physical examination, no abnormality was present in the neck, thyroid, ear, sinuses or lymph nodes. Video laryngoscopy produced normal results as well. On an intraoral examination ,A bony mass was palpable in the right tonsillar fossa.. The patient reported pain during palpation. Computed tomography with 3D reconstruction revealed (Figure1) elongated right styloid processes measuring 3.7 cm, the left styloid process measuring 3,4 cm. A diagnosis of Eagle's syndrome was made. The treatment option was surgical excision of the right styloid processes. The chosen access was intraoral approach (Figures 2,3). The patient underwent general anaesthesia with nasotracheal intubation. With the patient's mouth at the range of maximum opening, the region of the tonsillar pillar was palpated, indicating the location for incision with the electrocautery. Tissue dissection was performed and the styloid processes were located. The tissue was dissected till the most proximal portion of the styloid processes, an elongated styloid process was visualized and removed and then incisions were closed with simple continuous 4-0 vicryl sutures. Symptoms resolved immediately after surgery. and after six months, the patient was completely asymptomatic (Figures 1-3)

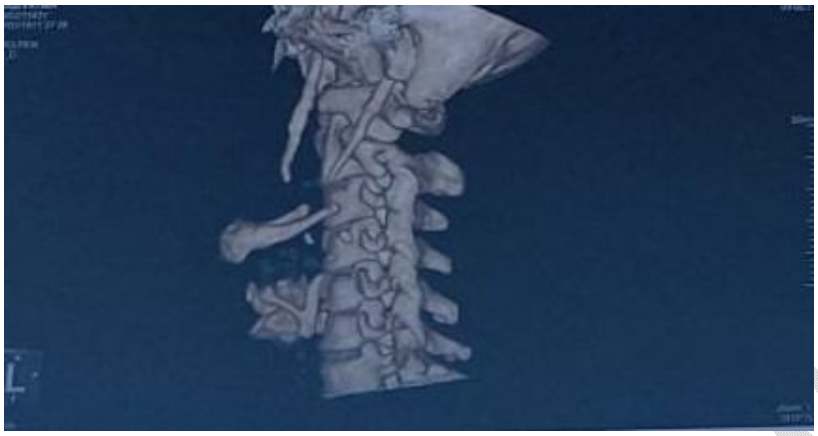

Figure 1 : 3D Ct scan showed elongated lef styloid precessess

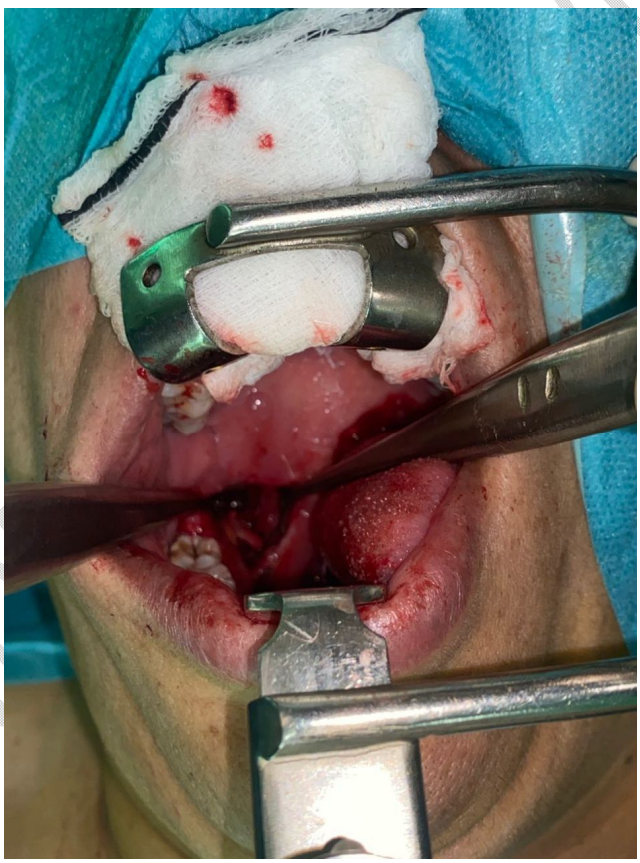

Figure 2: Per operative image of styloid processes.

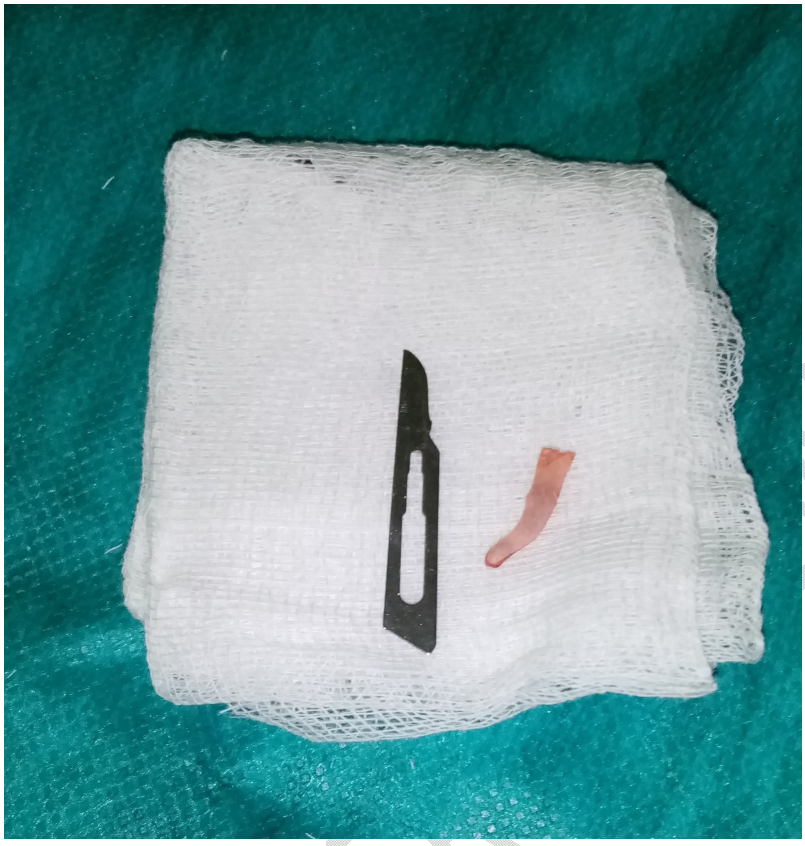

Figure 3: Post operative image of the styloid processes

Discussion

Eagle classified two forms of the syndrome, namely, carotid artery and classic type. The first, classic Eagle syndrome was described as pain, dysphagia, and a foreign body sensation that presents immediately after tonsillectomy. The second is stylocarotid sydrome in which an elongated styloid compresses the carotid artery and results in pain (parietal/ periorbital), visual disturbances, and syncope [5]. In the present case, the patient had symptoms of the classic type. The diagnostic workup for a patient assumed to have Eagle's syndrome must include a complete history and a thorough examination of the head and neck clinically to rule out other differential diagnoses. Also, the symptoms can be reproduced by palpation over the stylohyoid complex cautiously. This will help in localization of the pain when the patient performs oral and cervical movements. The tip of the styloid process can be palpated at the level of the tonsillar fossa as a bony spicule, which is hard and, when palpated, can cause local tenderness and associated symptoms [6]. Recent advances, such as three-dimensional CT, are being used by most practitioners as the radiological investigation of choice for the diagnosis, as they precisely measure the length,

angulation, and calcification of the styloid process [7]. There are many different etiologies that have been proposed to explain Eagle syndrome. three possible explanations was listed, which lead to abnormal stylohyoid complexes . One of the theories relates to retained embryologic cartilage tissue from Reichert's cartilage. The second theory is calcification of the stylomandibular ligament. The third explanation is expansion of osseous tissue at the origin of the stylomandibular ligament. In our case, Eagle syndrome was the main diagnostic hypothesis after physical and CT scan result. The symptomatic management of Eagle syndrome with conservative medical treatment, such as antiinflammatory medications, anticonvulsants, antipsychotics, or other analgesics is usually reserved for patients unable to undergo surgical procedure [8]. Surgical treatment is indicated for all patients due to it being the definitive treatment for this condition. The option for the surgical treatment in this case was taken, considering the age of patient, worsening of the symptoms reported by the patient and the definitive character of the intervention. The surgical management of the Eagle syndrome consists in the shortening of the elongated styloid process, with the surgical access remaining a matter of dispute. Intraoral access consists of the first stage involving the resection of the palatine tonsil (if no tonsillectomy had been performed before) followed by the second stage involving the incision of the tonsillar bed mucosa and partial resection of the process. Benefits of this technique consist in the possibilities to avoid a skin scar. However, the technique is associated with a high risk of complications due to the poor visibility of the operating field resulting in a likelihood of important anatomical structures within the parapharyngeal space being damaged in the course of the procedure. Another complication may consist in the infection of the parapharyngeal space and the neck [9]. Surgical treatment presents remission of symptoms without the need for continuous drug use [10]

conclusion

Eagle syndrome has a large variety of clinical presentations as evidenced by the multitude of non specific symptoms. As a result, it is important to understand the diagnostic workup, relevant imaging, and ultimate treatment options. Intraoral resection of styloid process remains the preferred surgical management.

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