

Eagle Syndrome: Unknown Pathology - A Case Report

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Abstract : *It is a rare pathology and it poses a problem of it poses a diagnostic problem where its clinical manifestations are often misleading. we can define it as a combination of symptoms due to elongation of the styloid process and/or ossification of the styloid ligament causing irritation of surrounding structures. We report the case of an eagle syndrome in a 42-year-old woman which presents with elongation of the clinical and radiographic styloid process. In the light of this case of eagle syndrome, we will discuss the clinical, therapeutic and evolutionary characteristics of this pathology.*

Keywords : Eagle, styloid, process, syndrome, elongation

Introduction :

Eagle syndrome is defined as a combination of all clinical and radiological signs secondary to elongation of the styloid process and/or calcification of the stylohyoid ligament. (1)

It presents an important cause of neck pain and craniofacial pain, due to a conflict between the styloid process and the surrounding anatomical structures. (2)

It is a rare pathology and it poses a problem of differential diagnosis with other pathologies...(3)

Case report :

A 42 -year-old woman, without a notable pathological history, she consults for diffuse and more marked right laterocervical pain in the ipsilateral submandibular region, evolving 04 years ago.

The pain is pharyngeal paresthesia type accentuated by swallowing movements, head rotation and cervical hyperextension, associated with intermittent dysphagia.

The clinical examination is normal, given the chronicity of the pain and its psychological impact on the patient, a cervico-facial scanner was performed, which objectified an aspect of a long bilateral styloid apophysis which measured 37 mm on the right and came into contact with the space homolateral pharyngeal mucosa, and 35 mm on the left (figure 1). With ossification of the right stylohyoid ligament giving a pseudo-joint appearance (Figure 2)

The patient was operated on under general anesthesia, by intraoral approach , having benefited from a bilateral tonsillectomy by dissection then :

- Dissection of the fatty and muscular cellulo tissue of the right amygdala lodge
- Discovery of the right styloid process (figure 3)
- Identification and section of the stylohyoid ligament
- using the Kerrison forceps, a section of the styloid process was made at the lower 2/3 and upper 1/3 junction (figure 4)
- Ensure hemostasis and closure of the parapharyngeal space

The postoperative course was simple with sedation of the pain. Control in 06 postoperative months was satisfactory with good healing and complete disappearance of pain.

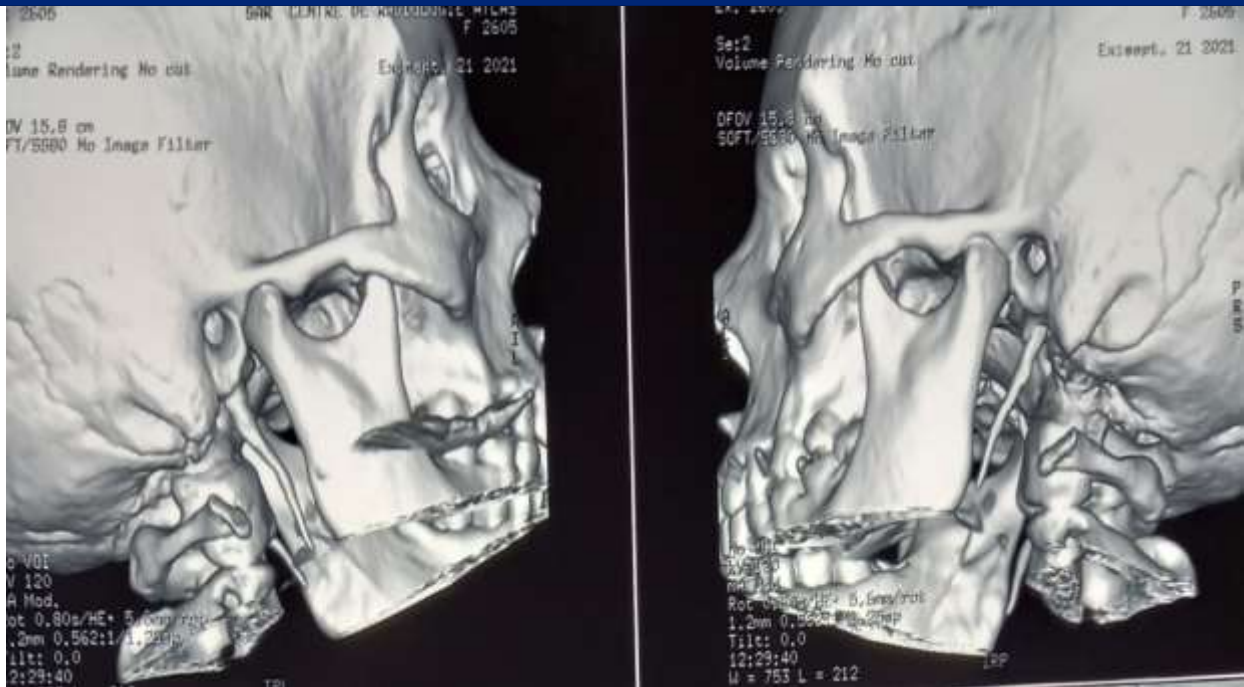


Figure 1 : cervico-facial CT scan - 3D reconstruction - showing a styloid process bilaterally



Figure 2 : cervico-facial CT scan – axial cuts – showing the ossification of the stylohyoid ligament

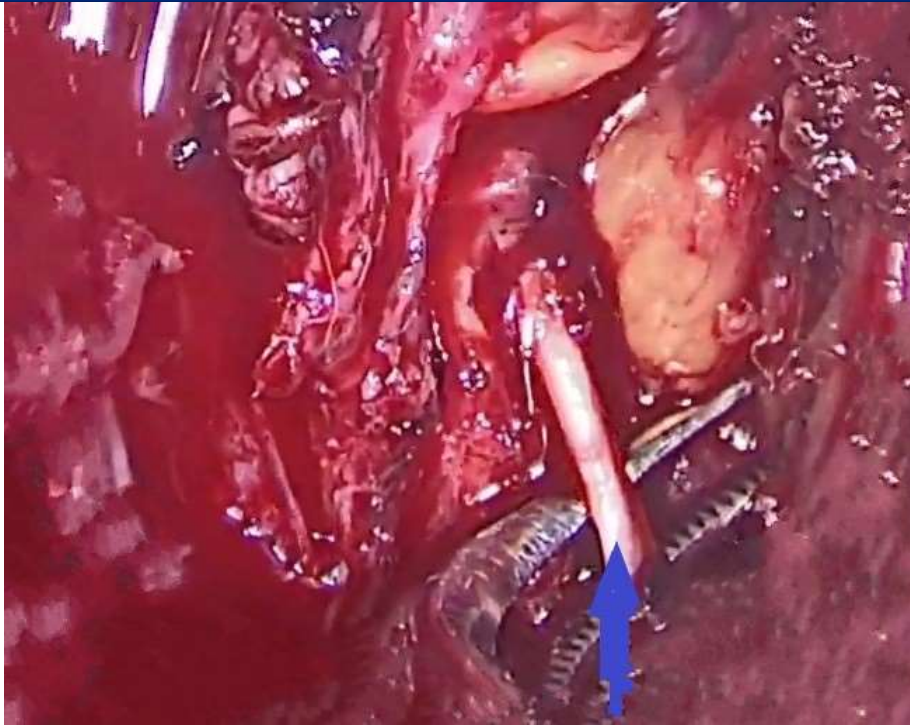


Figure 3 : operative view showing the ossified right hyoid ligament (blue arrow)



Figure 4 : operative view showing the right styloid process after cutting the stylohyoid ligament (orange arrow)

Discussion :

Eagle syndrome is a rare clinical manifestation, secondary to long styloid process or ossification of the styloid ligament or both. (1,2)

4% of the population would have a long styloid process but 90 to 96% asymptomatic only 4 to 10% of these patients present symptoms. (3,4)

This syndrome more common in females than males but overall gender prevalence is highly controversial. (5)

Most patients with Eagle syndrome are over 40 years old (6) with extremes of 20 and 80 years old. (7,8)

There are several theories that explain the mechanism of elongation of the styloid process and ossification of the stylohyoid ligament, according to Murtagh et al (9) it would be either an elongation of congenital origin with persistence of the cartilage of the cartilaginous matrix, either from calcification of the styloid ligament by an unknown process, or possibly by growth of bone in the region of the insertion of the stylo-hyoid ligament.

For Kurmann et al. (10), it would rather be ossification of the stylo-hyoid ligament linked to an aging process with loss of passive mobility or mechanical enthesopathy. Ossification could also be secondary to changes in the mobility of the hyoid bone or the activity of the muscles involved in swallowing secondary to cervical disc disease. An inflammatory origin has also been proposed. (9,10)

Other authors find a history of tonsillectomy or surgical or accidental trauma involving this anatomical region. (10, 11,12)

Clinically the symptomatology is very variable and we can conclude in 2 tables, the first includes ipsilateral neck pain, pharyngeal pain when swallowing or even earache. (12,13) These symptoms reflect irritation of neighboring neurological structures.

The second table includes vascular type pain, in the territory of distribution of the external and internal carotid artery by irritation of the peri carotid plexus. (12, 14)

it should be noted that cases of sudden death by brutal compression of the vasculo-nervous structures of the neck during the rotation of the head have been reported. (15) And cases of carotid dissection is a rare vascular complication of Eagle syndrome. (19)

The clinical examination more often objectified a hard filling at the level of the supra tonsillar fossa linked to the elongated styloid process. (13)

Eagle syndrome remains a diagnosis of exclusion. The differential diagnosis is essentially posed with trigeminal and glossopharyngeal neuralgia, a pathology of the temporomandibular joint or a tumor of the upper aerodigestive tract and chronic pharyngitis. (14,15,16)

CT with 3D reconstruction is a valuable tool in the diagnosis of Eagle syndrome due to its ability to provide all information regarding the styloid process, including its length, direction and anatomical relationships. (16)

The radical and curative treatment is surgery, by the excision of the calcified process either by intraoral approach, the authors who advocate the intraoral approach see that it is a simple technique, with a short operating time, while avoiding skin scars and extensive dissection. (1, 6, 17)

Its disadvantages are the risk of infection of the deep cervico-facial spaces, the poor visualization of the operative field and the increased risk of nerve or carotid injury. (17)

The external approach is thought more better due to the decreased risk of infection and better visualization of the operative field. (18). the disadvantages are the presence of a skin scar and the risk of paralysis of the mental branch of the facial nerve. (16,17)

Relief after surgery is usually immediate. The medical treatment is also described, anti-inflammatories and analgesics can improve the symptoms in the short term. A local treatment based on corticosteroid infiltrations can be initiated in patients who are not very embarrassed or who refuse the intervention. (18,19)

Conclusion :

Eagle syndrome is a rare pathology, little and poorly known, controversial in the literature. It remains a diagnosis of exclusion after having eliminated any ENT and neurological pathology, in particular neuralgic (V, IX).

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