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# A Pain When Swallowing: Eagle Syndrome

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**Keywords:** Eagle Syndrome, Long Styloid Process, CT Scan

## Introduction

Eagle syndrome is a rare and controversial condition characterized by a long styloid process causing irritation to surrounding structures. In this article, we report the case of a 56-year-old female patient who presented with pain when swallowing and bilateral lateral neck pain evolving over a few years. Diagnosis was made using cervical-facial computed tomography without contrast enhancement with multiplanar reconstructions and 3D volumetric reconstructions. Eagle syndrome is a challenging diagnosis for cervical-facial pain. Diagnosis relies on clinical and radiological findings, and surgical intervention is the treatment of choice.

## Clinical Observation

This is a 56-year-old female patient with no significant medical history, who presented with pain when swallowing and bilateral lateral neck pain evolving over a few years. The patient underwent analgesic treatment for two months without any improvement in her symptoms. After several consultations with different physicians, a diagnosis was made using cervical-facial computed tomography without contrast enhancement with multiplanar reconstructions (Figures 1 and 2) and 3D volumetric reconstructions. Surgical styloidectomy was performed, resulting in complete remission of symptoms.

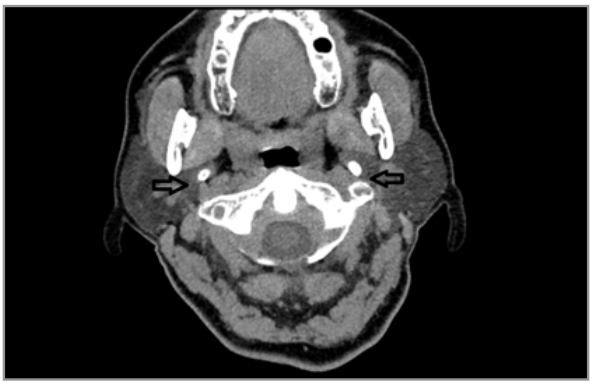

**Figure 1:** Transverse scanographic section/ spontaneous contrast: Parenchymal window The styloid processes in contact with the submucosal space of the pharynx.

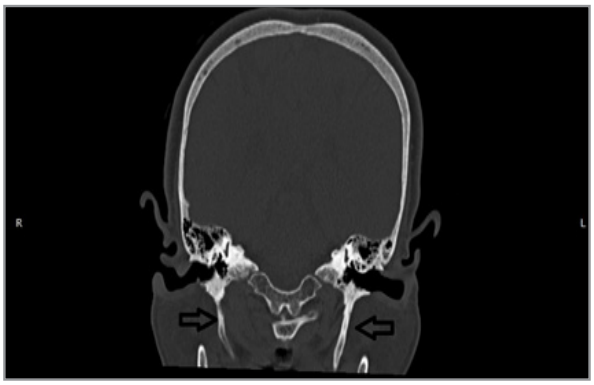

**Figure 2:** Coronal scanographic section: Bone window

**Diagnoses:** Eagle Syndrome

## Discussion

Eagle syndrome is a rare clinical entity first described by Eagle in 1937 [1]. This syndrome is caused by a long styloid process and/or calcification of the stylohyoid ligament and/or a long lesser horn of the hyoid bone [2]. Eagle syndrome occurs when the styloid process comes into contact with adjacent anatomical structures : the carotid arteries, the internal jugular vein, the facial nerve, the glossopharyngeal nerve, the vagus nerve, and the hypoglossal nerve [4, 5].

Several different theories attempt to explain the etiopathogenesis of Eagle syndrome, such as congenital elongation of the styloid process and acquired calcification and ossification of the stylo-

hyoid ligament [1]. The symptomatology is polymorphic and nonspecific. Two clinical presentations are reported. The first includes ipsilateral neck pain, pharyngeal pain when swallowing, or otalgia [3, 5], indicating irritation of neighboring neurological structures. The second presentation includes vascular-type pain in the distribution territory of the external and internal carotid artery due to irritation of the pericarotid plexus [3, 6].

Standard radiological exploration confirms the diagnosis by showing the presence of the bony process extending from the styloid process to the homolateral lesser horn of the hyoid bone. The potential drawbacks of conventional radiography include the superposition of multiple bony structures and secondary enlargements due to angulation. With CT scan, these drawbacks are eliminated. Indeed, CT scan specifies the relationships of the calcified stylohyoid ligament with neighboring vascular and nervous structures [4].

Curative treatment is surgical, based on the resection of the calcified process either via an endobuccal approach or an external approach.Through the endobuccal approach [3], the tonsillar fossa is palpated, and the tip of the styloid process is identified. The muscles under the mucosa are separated and dissected. The distal end of the process is carefully broken and excised, followed by suturing of the pharyngeal mucosa. In the presence of palatine tonsils, tonsillectomy should be performed first. This surgery can be performed under local anesthesia. Relief after surgery is usually immediate. Medical treatment is also described. Anti-inflammatories and analgesics can improve symptoms in the short term. Local treatment with corticosteroid injections can be initiated in patients who are mildly affected or refuse surgery.

## Conclusion

Le syndrome d'Eagle représente une entité nosologique souvent méconnue, caractérisée cliniquement par des douleurs cranio-faciales non spécifiques. Le diagnostic différentiel inclut la névralgie glossopharyngée et trijumeau, l'artérite temporale, la migraine, le dysfonctionnement de la douleur myofasciale et l'arthrite cervicale. Le syndrome d'Eagle doit toujours être suspecté, principalement chez la femme adulte, lorsque la douleur est unilatérale et ne répond pas aux analgésiques.

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