

## Case Report

# Hematoma of the parotid cavity revealing Eagles syndrome: a case report

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### ABSTRACT

Eagle's syndrome is characterized by elongation of the styloid process or calcification of the stylohyoid ligament, which irritates and disturbs adjacent anatomical structures. Its symptomatology is polymorphic. However, neurovascular manifestations may exceptionally be noted. We report a case of incidental discovery during an exploration for spontaneous retro-mandibular hematoma. The patient was 70 years old, Parkinsonian, with a history of untreated and chronic right retro-mandibular pain. He was admitted to the emergency room for a spontaneous retro-mandibular hematoma. A cervical CT confirmed the hematoma and revealed bilateral styloid process hypertrophy measuring 4.7 cm on the right and 4.3 cm on the left. Eagle's syndrome is a rare disease with many clinical manifestations ranging from discomfort to severe complications. In this case, it was a spontaneous hematoma whose probable cause could be related to the long styloid process. It is important to remain attentive in cases of chronic neck pain. Any diagnostic doubt should be resolved by CT measurement of the styloid process.

**Keywords:** Parotid hematoma, Eagle's syndrome, Long styloid process, Atypical neck pain

### INTRODUCTION

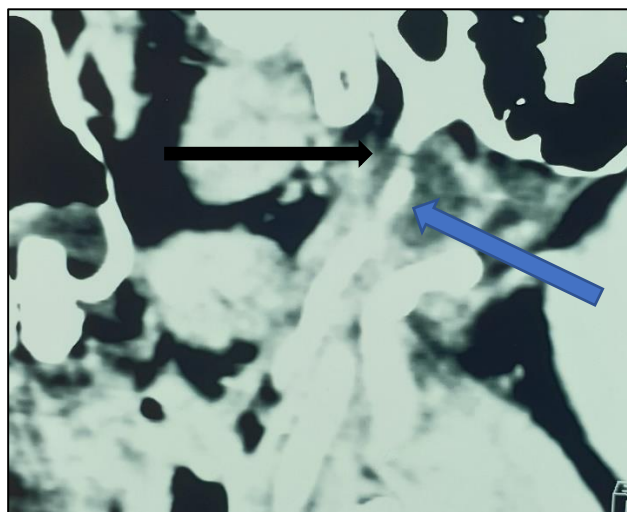
Eagle's syndrome, known as long styloid process syndrome, stylohyoid syndrome or Garel's styloid angina, is a group of clinical signs related to calcification of the stylohyoid ligament. Its diagnosis is easy when the symptomatology is typical with the CT scan which shows an elongation of the styloid process, accompanied by a more or less important stylohyoid calcification. In cases of atypical neck pain, the diagnosis is less easy and considerably delays the management. These patients lose time from one doctor to another and needlessly ingest antibiotics and anti-inflammatories without any lasting improvement.<sup>1</sup> On the other hand, the long styloid

process found on the CT scan should not be managed systematically because it is symptomatic in only 4% of cases.<sup>2</sup> The present observation reveals the importance of remaining attentive to the complaints of the patients for the sometimes not easy diagnosis of Eagles syndrome. This is an atypical case revealed by a hematoma of the parotid region.

### CASE REPORT

This is a 70-year-old patient, known and followed parkinsonian, received in the emergency room for acute parotid swelling, painful, non febrile, of brutal installation following an audible snap during a sudden

rotation of the head. The interrogation revealed a frugal symptomatology evolving in an intermittent way for more than six years. At first, it was an impression of a foreign body blocked in the right lateral region of the neck. Progressively this impression was replaced by real cervical pain, sometimes left and sometimes right, favored by anteflexion of the head, of intensity varying between 1/10 and 3/10 on the visual analog scale. On several occasions this patient was treated for chronic pharyngitis by his general practitioner. On physical examination, the general condition was preserved. There was no evidence of weight loss or fever. The cervicofacial examination revealed a right parotid swelling, opposite the angle of the mandible, mole and sensitive with painful palpation of the right tonsil compartment. There was also an analgesic limitation of the cervical rotation. The palatine tonsils were bilateral and symmetrical, non-inflammatory and cryptic. There was no curvature of the soft palate or lateralization of the palatal uvula. The biological workup did not reveal an inflammatory syndrome. The cervical CT revealed a right fluid collection (Figure 1), rounded and well limited in the middle of which a styloid process measuring 4.7 cm on the right and 4.3 cm on the left was discovered.



**Figure 1 : CT image of a hematic collection (blue arrow) crossed by a styloid process with bone continuity solution (black arrow).**

The puncture, after CT scan, brought back 1.5 cc of liquid blood and made the swelling and pain disappear (Figure 1). The patient did not consent to the idea of a surgical exploration. After one month of follow-up, he still complained of right lateropharyngeal discomfort without hematoma.

## **DISCUSSION**

This is an exceptional case of spontaneous hematoma of the right parotid lodge secondary to either a false fracture or false articulation of the styloid process or to probable irritation of a vessel in the path of the styloid process. In

literature, only one similar case of eagle syndrome has been described but other cases of vascular manifestations have been reported.<sup>2-6</sup> Among these, we have, 2 cases of hemorrhage and two cases of ischemia.<sup>3-6</sup> They were all male with ages ranging from 42 to 74 years. Only one had a defect of Ehler Danlos syndrome.<sup>3</sup> Our observation reported the case of a parkinsonian patient followed up. On the other hand, Balde and al. found in their series a female predominance (14 men out of 15 women) with an age ranging from 23 to 55 years for an average age of 31.33.<sup>7</sup> Thus, in addition to all the other cases of vascular manifestations reported, we note that advanced age, medical history and male gender seem to have a relationship with the occurrence of vascular complications of Eagles syndrome.

Apart from these vascular manifestations, other pictures are observed such as glossodynia and neuralgia of V, VII, IX and X.<sup>2,8</sup> However, in the majority of cases, the manifestations are polymorphous and varied, classically made as a triad with sensation of glomus, dysphagia and unilateral cervico-facial pain typically occurring after tonsillectomy.<sup>2</sup> In our case, it is a chronic lateropharyngeal pain neglected by the patient on which this spontaneous acute hemorrhagic accident was added.

The explanation for these phenomena may be the numerous close vascular-nervous relationships of the styloid process and the stylohyoid ligament. These relationships may result in a conflict causing nerve irritation or even vascular compression, which may lead to neuralgia, dissection, thrombosis or, exceptionally, traumatic vascular rupture following a styloid process fracture.<sup>5</sup>

Diagnostic confirmation of this syndrome is done by CT scan.<sup>9</sup> In our case, it was a bilateral hypertrophy of the styloid bone stage 1 according to the modified classification of Langlais associated with a continuity solution in the middle of a hematic collection.<sup>7</sup>

For many authors, the treatment of this syndrome is essentially surgical.<sup>8</sup> In our case, the patient was not operated because of lack of consent and we thought it would be useful to report such a rare diagnostic aspect of Eagle syndrome.

## **CONCLUSION**

The diagnosis of Eagle syndrome is not always easy. It depends on a diverse symptomatology dominated by a typical cervicalgia which should always be sought. The scanner is the key examination. It usually reveals an elongation of the styloid process, accompanied by a more or less important stylo-hyoid calcification. The angioscanner allows to show the relations with the big vessels of the neck especially in hemorrhagic forms.

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