CASE REPORT

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A Rare Case in Intensive Care Unit: Eagle Syndrome

Yoğun Bakımda Nadir Bir Olgu: Eagle Sendromu

Ayşe KÖSEM[1], Pınar KARABACAK[1], Hacı Ömer OSMANLIOĞLU[1], Eyyup Sabri ÖZDEN[1], Mehmet Emre SİVRİCE[2]

[1]Süleyman Demirel University Faculty of Medicine, Department of Anesthesiology and Reanimation, Isparta, Turkey
[2]Süleyman Demirel University Faculty of Medicine, Department of Otorhinolaryngology, Isparta, Turkey

ABSTRACT

Eagle syndrome is the lengthening of the styloid process or calcifying of the stylohyoid and stylomandibular ligament. Although symptoms are non-specific, such as a sore throat and difficulty swallowing, severe conditions such as syncope may also be seen. This study presented a case of a 57-year-old patient diagnosed with Eagle syndrome while syncope etiology was being investigated, and the diagnosis and treatment processes of this uncommon syndrome were explained.

Keywords: Eagle syndrome, stiloid process, syncope

ÖZ

Eagle sendromu, stiloid proçesin uzaması veya stylohyoid ve stylomandibular ligamentin kalsifikasyonu olarak tanımlanır. Genellikle boğaz ağrısı, yutma güçlüğü gibi non-spesifik bulgulara sebep olsa da senkop gibi ciddi klinik durumlar görülebilir. Bu olgu sunumunda 57 yaşında senkop etiyolojisi araştırılırken yoğun bakımda Eagle sendromu tanısı konulan bir hasta ve nadir görülen bu sendromun tanı ve tedavi süreci anlatılmıştır.

Anahtar Kelimeler: Eagle sendromu, stiloid proçes, senkop

INTRODUCTION

Eagle's syndrome is a sporadic syndrome defined as the elongation of the styloid process (SP) or calcification of the stylohyoid and stylomandibular ligament. Its anatomical location facilitates the movement of the tongue, pharynx, larynx, hyoid bone, and mandible. In advanced cases, syncope with sudden head movements may occur. Some authors also call this syndrome styloid syndrome or styloid-carotid artery syndrome. The fact that it is a rare syndrome and the findings are non-specific makes it challenging to diagnose[1,2].

In this case report, we presented the patient who developed respiratory arrest while investigating the etiology of syncope and was followed and treated in the intensive care unit because he was diagnosed with eagle syndrome in the intensive care unit, and the follow-up treatment process is a rare condition.

CASE REPORT

A 57-year-old male patient was admitted to the intensive care unit as intubated due to respiratory arrest from the neurology service. In his anamnesis, it was learned that he had been diagnosed with diabetes mellitus and hypertension for about 5 years and regularly used the medical treatment for these conditions. He was admitted to the neurology clinic to investigate the etiology due to the complaints of a constricting headache extending from the neck to the skull base, lasting two to three times a day for about 1 year, tremors in the hands, and short-term fainting two or three times a week. It was learned that the patient, who had been admitted to the psychiatry ward for about 6 months before hospitalization and had been using quetiapine and sertraline for about 6 months in an external center, had short-term fainting complaints two or three times a week, and used levetiracetam 1000 mg/day with

Address for Correspondence: Ayşe KÖSEM MD, Süleyman Demirel University Faculty of Medicine, Department of Anesthesiology and Reanimation, Isparta, Turkey
Phone: +90 538 528 39 79 **E-mail:** aysekosem_07@hotmail.com **ORCID ID:** orcid.org/0000-0003-0377-5007
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a preliminary diagnosis of epilepsy. Electroencephalography, brain computed tomography (CT), brain magnetic resonance, positron emission tomography-CT examinations of the patient, who was followed in the service for the etiology of syncope, were found to be normal. Myocardial perfusion scintigraphy revealed perfusion loss in the apicoseptal and inferolateral wall midventricular segment, and follow-up was recommended. After midazolam was administered to the patient, who had seizure-like activity during the follow-ups, after respiratory arrest and cardiac arrest developed, cardiopulmonary resuscitation was performed for 5 minutes, and the patient was intubated and transferred to the anesthesia intensive care unit. On physical examination, it was observed that the left carotid pulse was significantly weaker than the right one, and despite the sedation, the patient's neck was deviated to the left. Consciousness and motor examination could not be performed in the patient under sedation. In the carotid Doppler performed for carotid pulses, no abnormal flow was found bilaterally and bilateral currents were evaluated as normal. In the neck CT performed due to limitation of neck movements and deviation to the left, the right SP length was 36 mm (Figure 1), the left was 28 mm, and the patient was diagnosed with Eagle syndrome because of clinical symptoms. The operation was planned for the patient evaluated by the ear nose and throat clinic. Intraoperatively, under general anesthesia, the long styloid segment was excised using the intraoral approach after tonsillectomy. The patient, who was taken to the postoperative intensive care unit, was extubated on the same day and transferred to the service on the 4th postoperative day without any problems. Informed consent was obtained from the patient.

DISCUSSION

Eagle[3] describes Eagle syndrome in 1937. The SP is 25-30 mm long, located antero-inferiorly at the lowest part of the temporal bone. Anatomically, the SP is located between the internal and external carotid arteries and lateral to the tonsillar fossa. Generally, patients are older than 30 years[4]. Its etiology is not fully known. However, there are many hypotheses[3]. Lengths over 30 mm are defined as a long process, and it is reported that an elongated SP is seen in 4% of the general population. It has been reported that only 4-5% of these cases are symptomatic.

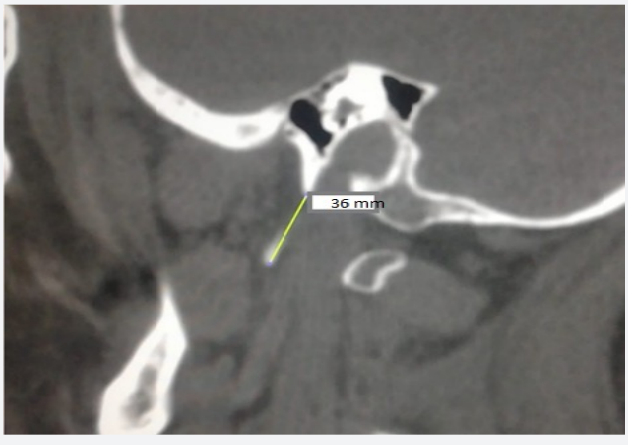


Figure 1. Right styloid process

Although the symptoms are usually mild, diagnosing severe conditions such as syncope and Eagle syndrome should be considered in the differential diagnosis. The important thing is whether these patients are symptomatic[5]. Clinically, it has been reported that it is most common in the third or fourth decade and is more common in women. Contrary to these, our case was a 57-year-old male patient. Clinically, non-specific findings such as pain localized in the tonsillar fossa, foreign body sensation in the pharynx, dysphagia, painful swallowing, otalgia, headache, facial pain, and tinnitus may be seen.

In some cases, more severe clinical findings may occur due to the compression of the carotid artery by the SP. These findings may include pain along the carotid artery distribution while turning the head or more clinical severe conditions such as a transient ischemic attack, vertigo, or syncope, as in our patient[6]. Since these findings can be confused with the clinic of many diseases, it may lead to misdiagnosis and wrong medication. Our patient had been using antipsychotic and antiepileptic therapy for months. Since the symptoms are severe during sudden neck movements, patients may try to avoid sudden movements and reduce styloid compression. In our patient, the neck deviated to the left, and the patient was probably trying to reduce the pressure in this position to reduce the proper process compression.

In some cases, it is stated that Eagle syndrome occurs after a tonsillectomy operation or trauma. However, these reasons were not present in our patient. An essential thing in this syndrome, which has no specific signs, symptoms, or imaging method in its diagnosis, is suspicion among conventional radiographs, panoramic radiography, and CT imaging methods. CT is a valuable diagnostic tool for evaluating the region's anatomy and making a surgical plan[7]. In our case, SPs were identified on neck CT, and their exact lengths could be measured.

Treatment can be managed conservatively or surgically[8]. Analgesics, antidepressant drugs, anticonvulsants, non-steroidal anti-inflammatory drugs, steroids, and lidocaine transpharyngeal injections are used as conservative treatments today. However, the most effective treatment is the surgical shortening of the SP. An intraoral or extraoral approach can be performed surgically. The intraoral approach was used in our patient. The advantages of this approach are that it is relatively simple, has a short operation time, and can be

performed without scarring. On the other hand, the extraoral approach ensures that the surgery is performed with a better command of the surgical field and that all structures are more visible. However, it takes too much time, and the risk of injury to the facial nerves or branches, visible scarring, and a lengthy recovery period have led us to prefer the intraoral technique[9].

CONCLUSION

As a result, serious complications that can cause mortality and morbidity can be seen in this rare disease, which has non-specific findings. The diagnosis of the disease can be made after suspicion. Early diagnosis is essential in preventing severe life-threatening complications by starting treatment early and preventing unnecessary medications by making other diagnoses to the patient.

Ethics

Informed Consent: Consent form was filled out by a participant.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: M.E.S., Concept: A.K., Design: H.Ö.O., A.K., Data Collection or Processing: E.S.Ö., Analysis or Interpretation: P.K., A.K., Literature Search: P.K., A.K., Writing: A.K.

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