

# PTERYGOID HAMULUS SYDROME AS A CAUSE OF OROPHARYNGEAL PAIN

Head and Neck Surgery Submitted: 18.09.2021

Accepted: 06.07.2023 Published: 06.07.2023

Mehmet Ali Say<sup>1</sup>, Mehmet Karakaya<sup>1</sup>, Deniz Baklacı<sup>2</sup>, Ergin Bilgin<sup>2</sup>

<sup>1</sup> Çerkezköy Devlet Hastanesi <sup>2</sup> Bülent Ecevit Üniversitesi Tıp Fakültesi

### Özet Abstract

### OROFARENGEAL AĞRI SEBEBİ OLAN PTERYGOİD HAMULUS SENDROMU

Pterygoid hamulus sendromu, bursit veya uzamış bir hamulus sonucu hamular bölgenin iltihaplanmasının neden olduğu damak ve faringeal bölgelerdeki ağrıyı tanımlar. Pterygoid hamulus sendromu, hamular bölgede ağrı, boğaz ağrısı, damak ağrısı, lokal eritem, yutma güçlüğü ve kulak ağrısı gibi semptomları içerir. Bu çalışmanın amacı, nadir görülen ve cerrahi olarak tedavi edilen pterygoid hamulus sendromu tanılı bir hastayı sunmak ve faringeal ağrıya neden olan hastalıkların ayırıcı tanısında bu sendromun akılda tutulmasının önemini vurgulamaktır.

**Anahtar kelimeler:** Pterygoid Hamulus Sendromu, Orofaringeal Ağrı, Hamulus Bursiti

### PTERYGOID HAMULUS SYDROME AS A CAUSE OF OROPHARYNGEAL PAIN

Pterygoid hamulus syndrome describes the pain in the palate and pharyngeal regions caused by inflammation of the hamular region as a result of bursitis or a protracted hamulus.. Pterygoid hamulus syndrome includes symptoms such as pain in the hamular region, sore throat, palate pain, local erythema, swallowing difficulty, and otalgia. The aim of this study is to present a patient with a diagnosis of pterygoid hamulus syndrome, which is rarely seen and treated surgically, and to emphasize the importance of keeping this syndrome in mind in the differential diagnosis of diseases that cause pharyngeal pain.

**Keywords:** Pterygoid Hamulus Sydrome, Oropharyngeal Pain, Hamular Bursitis

### Introduction

The pterygoid hamulus, a small part of the sphenoid bone, may be the source of pain in the velum and pharynx. Pterygoid hamulus syndrome describes the pain in the palate and pharyngeal regions caused by inflammation of the hamular region as a result of bursitis or a protracted hamulus. Pterygoid hamulus syndrome includes symptoms such as pain in the hamular region, sore throat, palate pain, local erythema, swallowing difficulty, and otalgia [1]. The diagnosis of pterygoid hamulus sydrome is very difficult due to the overlap of myogenic, neurological and psychogenic pain symptoms. The differential diagnosis includes temporomandibular joint disorder, trigeminal and glossopharyngeal neuralgia, impacted third molar, styloid process abnormalities, cysts and middle ear infections and tumors [2]. The aim of this study is to present a patient with a diagnosis of pterygoid hamulus syndrome, which is rarely seen and treated surgically, and to emphasize the importance of keeping this syndrome in mind in the differential diagnosis of diseases that cause pharyngeal pain.

### **Case Report**

A 61-year-old male patient was admitted to our outpatient clinic with pain in the oral cavity and pharynx. The patient also had pain in the right ear and difficulty in swallowing. There was no history of intraoral trauma or

## **ENTCase**

injury. The patient had pain for about 1 year. The patient, who has been in pain for nearly a year, was previously treated with antibiotics and nonsteroidal anti-inflammatory medicines at otolaryngology outpatient clinics. The patient's pain recurred when he stopped taking the drugs. In the clinical examination, there was intense tenderness on palpation of the right hamulus. The mucosa on palatal hamulus was normal. The complaint of pain and burning increased when he touched this area with his tongue or finger. The computed tomography showed that the pterygoid hamulus of the right side protruded more medially than the left side (Figure 1).



Figure 1
Preoperative computed tomography image of the patient.

Local anesthetic injection was performed for diagnosis and it was observed that the patient's pain decreased. Local steroid infiltration was tried first for the treatment. It was decided to perform surgery on the patient whose complaint recurred in the follow-ups.

Under general anesthesia, an incision was made into the overlying mucosa of the right pterygoid hamulus. The pterygoid hamulus was exposed with dissecting scissors and the bone was excised in two pieces with a rongeur. The remaining pointed edges were smoothed with the help of a bur (Figure 2).

ENTcase 2023; 9(3):92-95 Page 93

### **ENTCase**



Figure 2
Intraoperative image of the patient and the removed palatine hamulus.

#### Discussion

Palatine hamulus can cause atypical pain in the oral cavity and pharynx. In the literature, there are also differences in the terminology of this disease such as "Pterygoid Hamular Syndrome", Hamular Bursitis" and "Hamulus Hypertrophy" [3].

In our case, only antibiotics and nonsteroidal anti-inflammatory drugs were prescribed and the pain recurred after stopping the intake of drugs. This finding made us think that the pain is an inflammatory disease.

The exact etiology of pain from the hamular region is unknown. According to Kronman et al., this pain is caused by bursitis, which inhibited muscular contraction of the tensor veli palatini muscle [4]. Sasaki et al. suggested one possible mechanism wherein the abnormal pterygoid hamulus initially causes mechanical irritation to the surrounding tissues and impaired muscular contraction of the tensor veli palatini muscle, which in turn may cause bursitis [5]. The branches of the major and minor palatine nerve, glossopharyngeal nerve, and facial nerve stimulated by these events may result in painful sensation [3].

Local anesthesia infiltration is helpful for the diagnosis [6]. Dupont and Brown reported that tenderness to palpation in the hamulus region disappeared after anesthetic infiltration of the area [7]. In the presented case, the pain caused by palpation disappeared after a local anesthetic was similarly administered.

In the treatment, medical and surgical treatments including injections are administered. Infiltration of 1 ml of dexamethasone at 4 mg per ml by local injection into the area is recommended to reduce inflammation [3]. Patients should be called for consultation at regular intervals and injections should be repeated if the patient's symptoms improve in injection treatment. Oral anti-inflammatory drugs can be administered in the meantime. Surgical treatment should be considered if conservative treatment fails or if the palatine hamulus is longer than it should be [3]. The hamulus is exposed and resected surgically [4,5,6,8].

The tensor veli palatini tendon should be left intact during surgery. There is a study showing that pterygoid hamulotomy is an effective procedure for the creation of experimental serous otitis media in cats (9). Noone et al.

ENTcase 2023; 9(3):92-95 Page 94



and Kane et al. stated that the fracture of the pterygoid hamulus and consequent disturbance of the tensor veli palatine tendon do not significantly alter the state of middle ear disease [10,11].

#### Conclusion

The diagnosis of patients with complaints of pain in the palate and pharyngeal is quite difficult, and palatine hamulus syndrome which is rarely seen should be kept in mind.

**Informed Consent**: From the patient

#### References

- 1. Shankland WE 2nd. Bursitis of the hamular process. Part II: diagnosis, treatment and report of three case studies. Cranio 1996;14:306-11.
- 2. Ramirez LM, Ballesteros LE, Sandoval GP. Hamular bursitis and its possible craniofacial referred symptomatology: Two case reports. Med Oral Patol Oral Cir Bucal 2006;11:E329-33.
- 3. Kende P, Aggarwal N, Meshram V, Landge J, Nimma V, Mathai P. The pterygoid hamulus syndrome An important differential in orofacial pain. Contemp Clin Dent 2019;10:571-6.
- 4. Kronman JH, Padamsee M, Norris LH. Bursitis of the tensor veli palatini muscle with an osteophyte on the pterygoid hamulus. Oral Surg Oral Med Oral Pathol 1991;71:420-2.
- 5. Sasaki T, Imai Y, Fujibayashi T. A case of elongated pterygoid hamulus syndrome. Oral Dis 2001;7:131-3.
- 6. Eyrich GK, Locher MC, Warnke T, Sailer HF. The pterygoid hamulus as a pain-inducing factor. A report of a case and a radiographic study. Int J Oral Maxillofac Surg 1997;26:275-7.
- 7. Dupont JS Jr, Brown CE. Comorbidity of pterygoid hamular area pain and TMD. Cranio 2007;25:172-6.
- 8. Hertz RS. Pain resulting from elongated pterygoid hamulus: report of case. J Oral Surg 1968;26:209-10
- 9. Odoi H, Proud GO, Toledo PS. Effects of pterygoid hamulotomy upon eustachian tube function. Laryngoscope 1971;81:1242-4.
- 10. Noone RB, Randall P, Stool SE, Hamilton R, Winchester RA. The effect on middle ear disease of fracture of the pterygoid hamulus during palatoplasty. Cleft Palate J 1973;10:23-33.
- 11. Kane AA, Lo LJ, Yen BD, Chen YR, Noordhoff MS. The effect of hamulus fracture on the outcome of palatoplasty: a preliminary report of a prospective, alternating study. Cleft Palate Craniofac J 2000;37:506-11.

ENTcase 2023; 9(3):92-95 Page 95