

## OLGU BİLDİRİSİ / CASE REPORT

# Pyogenic granuloma of the epiglottis: a case report

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### Epiglot piyojenik granüloma: olgu sunumu

Piyojenik granülom, deri ve mukoz membranların benign vasküler bir lezyonudur. Sıklıkla baş ve boyun bölgesinde görülür. Bu lezyonların etiyojisi tam olarak bilinmemekle birlikte; etiyojide travma, gingival ve periodontal hastalıklar, kötü ağız hijyeni, viral veya fungal hastalıkların rol oynadığı düşünülmektedir. Piyojenik granülomaların büyük bir çoğunluğu çene ve oral kavitede lokalizedir. Larenks lokalizasyonu ise oldukça nadirdir. Bu yazıda, epiglot piyojenik granüloma saptanan 56 yaşındaki erkek hastanın kliniği, ayırıcı tanısı ve tedavisi tartışıldı.

**Anahtar Sözcükler:** Piyojenik granülom, epiglot, larenks.

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### Abstract

The pyogenic granuloma is a benign vascular lesion of the skin and mucous membranes that frequently seen in the head and neck. The etiology of this lesion remains unknown but trauma, gingival and periodontal diseases, bad oral hygiene, viral or fungal infections are considered in the etiology of pyogenic granuloma. The majority of pyogenic granulomas are located in the cheek and oral cavity but larynx localization is too rare. In this paper clinical findings of a 56-year-old-male patient with pyogenic granuloma of epiglottis was presented, differential diagnosis and treatment was discussed.

**Key Words:** Pyogenic granuloma, epiglottis, larynx.

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## Introduction

The pyogenic granuloma is a benign vascular lesion of the skin and mucous membranes. It was first described by Poncet and Dor in 1897.<sup>1</sup> It is seen most commonly in woman between the ages 20-40 years.<sup>2</sup> Pyogenic granulomas clinically presented with surface ulcerated, soft pediculated lobular mass. The lesion characteristics are rapidly growing and bleeding. The majority of pyogenic granulomas are located in the head and neck and especially in the oral cavity. In the oral cavity, gingival localization is the most common site.<sup>3</sup>

Although larynx localization was reported previously, epiglottic localization of pyogenic granuloma has not yet reported. In this paper clinical findings of a 56-year-old-male patient with pyogenic granuloma of epiglottis was presented, differential diagnosis and treatment was discussed.

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## Case Report

56-year-old male patient admitted to our clinic with the complaints of hemoptysis. Hemoptysis of the patient was started 12 hours ago, lasted 30 minutes and resolved. During the last one-month period in the history, the patient experienced dysphonia while eating solid foods and also sensation of foreign body in his throat. However, dispnea and dysphagia were not presented. He has not the history of operation and intubation, hypertension, and diabetes mellitus, gastroesophageal reflux, infection, cigarette, and alcohol.

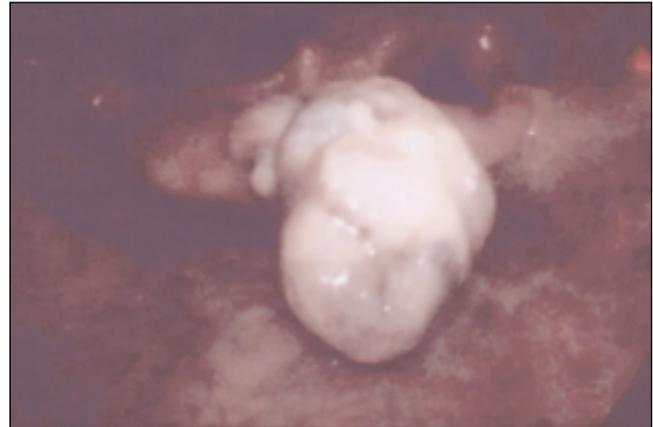
Ear and nose examination were normal and oral hygiene and dental conditions were good, in pharyngeal examination. In laryngeal examination, there was a mass based on the left free edge of the epiglottis and reach to laryngeal and vallecular surface. The mass was cherry red color with ulceration and there were some hemorrhagic focus and crusts on the free edge of the mass and dimension of the mass were 10x15 mm (Figure 1). Other laryngeal structures were normal.

Complete blood counts, biochemical analysis and chest radiographs were normal. ESR was 1mm/h. PTT, aPTT values and bleeding times were in normal range. HIV was negative. Ultrasonographic evaluation of head and neck was normal.

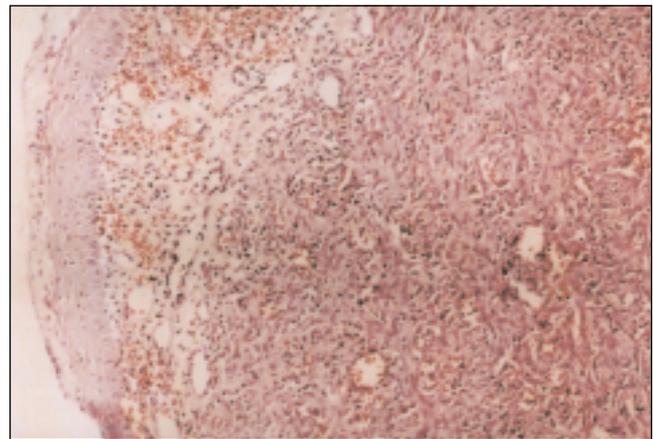
Direct laryngoscopy was performed under general anesthesia and revealed a mass that originated from the left free edge of the epiglottis and reach to laryngeal and vallecular surface and the mass was 10x15 mm diameters. There were ulceration and hemorrhagic focus on the mass. The mass was surgically excised from the epiglottis. The histopatological examination of the mass revealed the characteristics of the endothelial and stromal elements. In some sections capillary lobule formation, inflammatory infiltrate and ulcerations were noticed and diagnosed as pyogenic granuloma (Figure 2). We did not determine any recurrence in the period of postoperative 18 months (Figure 3).

## Discussion

Pyogenic granuloma is a benign vascular lesion of the skin and mucous membran and the etiology of this lesion remains unknown. Trauma, gingival and periodontal diseases and bad oral hygiene are considered



**Figure 1.** The preoperative appearance of the patient with pyogenic granuloma based on the epiglottis.



**Figure 2.** Light microscopy of pyogenic granuloma revealed the character of the endothelial and stromal elements, capillary lobule formation, inflammatory infiltrate.



**Figure 3.** The postoperative 10 months appearance of the patient's larynx.

in the etiology of pyogenic granuloma.<sup>4</sup> Several investigators hypothesized that it is hyperproliferative vascular response to infective organisms of low virulence. Poncet and Dor suggest that the etiological organisms were fungus. In the 19th century Hertzels applied the name pyogenic granuloma, believing the lesion to be a localized bacterial infection.<sup>5</sup> Viral etiology has also been suggested but never reported before reports. More recent studies about pyogenic granuloma suggest that the main etiological factor is thought to be traumatic.<sup>6</sup> It is reported that pyogenic granuloma arise from trauma to the mucous membrane, healing abnormality with extensive formation of granulation tissue.<sup>1</sup> Vocal cord granulomas tend to arise in patients who have history of vocal abuse, gastric reflux and prolonged endotracheal intubation.<sup>7</sup> There were none of these factors, especially trauma, in our patient.

Patrice et al<sup>5</sup> reported that two-thirds of pyogenic granulomas were located in the head and neck area and within the head and neck region the most frequent sites were the cheek (28.8%), oral cavity (13.5%), scalp (10.8%), forehead (9.9%), eyelid and lips (9%). Rarely pyogenic granuloma is seen on the septum.<sup>8</sup> Gingiva is the most common site in oral cavity and laryngeal occurrence is rare and there is not any knowledge in the literature about the localization of pyogenic granuloma in the epiglottis.

Lai et al.<sup>7</sup> presented a pyogenic granuloma that localized on vocal cord and he reported that laryngeal pyogenic granulomas are so rare and usually located in the cartilaginous portion of the larynx. Sataloff et al<sup>9</sup> treated a pyogenic granuloma on the right side of the posterior glottis with antireflux therapy but pyogenic granuloma recurred despite medical therapy and then recurrent granuloma was surgically removed. In our case, pyogenic granuloma is originating from the free edge of the epiglottis and we did not find any knowledge about this localization in the literature.

The bleeding which is episodic, frequently and often refractory to pressure, hoarseness, dyspnea, sensation of lump in the throat, choking and dysphagia are seen in the patients who have pyogenic granuloma that localized in the oral cavity and especially in the larynx.<sup>5</sup> In the present case; hemoptysis, sensation of lump in

the throat and dysphagia during especially with foods were the complaints of the patients.

Histologically pyogenic granuloma exhibits a lobular arrangement of capillaries within the deep portion of the lesion.<sup>5</sup> Mills et al<sup>10</sup> emphasized that these lobules are the critical identifying feature of the lesion. In the histological examination of our case endothelial and stromal elements, capillary lobule formation, inflammatory infiltrate and ulcerations were revealed.

Differential diagnosis of the pyogenic granulomas in the epiglottis includes; hemangioma, angiofibroma, hemangioendothelioma, hemangiopericytoma, angiosarcoma, angioleiomyolipoma, Kaposi's sarcoma, granulomatous infectious diseases, traumatic granuloma, epithelial diseases, pseudocarcinomatosis, hyperplasia, carcinosarcoma, carcinoma, myxoma, histiocytoma, chondrosarcoma, verrucous and squamous cell carcinoma.<sup>11,12</sup>

Vocal cord lesions can be treated medically but these lesions are often requiring surgical resection. The choice of medical therapies are antireflux therapy, antibiotics, steroids, voice therapy and eliminating other factors that cause chronic irritation.<sup>9</sup> Treatment choice of pyogenic granulomas include; observation, cautery, electrodesiccation, curettage and surgical tangential excision.<sup>10</sup> It was reported that recurrence rate was 43.5% for treated by cautery alone and 16% for surgical superficial excision.<sup>10</sup> We treated the pyogenic granuloma that originate from the free edge of the epiglottis by superficial excision and we did not determine any recurrence in the period of postoperative 18 months.

In conclusion pyogenic granulomas can originate from the different anatomical region of the larynx. Pyogenic granuloma must be thought in the diagnosis of the masses that characterized by hemorrhagia that originate from the epiglottis.

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**Conflict of interest statement:**

No conflicts declared.

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