Case Report

Pyogenic Granuloma: A Usual Presentation at an Unusual Site

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Abstract

Pyogenic granuloma, also known as Lobular capillary hemangioma (LCH), is a common benign vascular tumor of proliferating blood vessels. It usually arises from skin, appearing as raised, bright red lesions which may show bleeding manifestations. Laryngeal origin of pyogenic granuloma is extremely rare. Here we present a case of 50-year-old female who presented with complaints of foreign body sensation in throat along with difficulty in swallowing. Histopathological findings of the excised mass using bipolar cautery were those of lobular capillary hemangioma arising from pyriform fossa. This case is reported for its rarity.

Keywords: Lobular Capillary Hemangioma; Pyogenic granuloma; Larynx; Pyriform fossa.

Introduction

Pyogenic granuloma, also known as Lobular capillary hemangioma (LCH), is a benign proliferation of capillary blood vessels adopting a lobular configuration [1]. It was previously called pyogenic granuloma because of its reddish and nodular appearance and is difficult to distinguish from laryngeal granuloma [2]. The term 'pyogenic granuloma' is a misnomer, as the lesion is not of bacterial origin, nor does it contain purulent material or granulomas. It is a smooth, raised red lesion which may be sessile or have a pedunculated base that varies in size from a few millimeters but rarely exceeds 2.5 cm [3]. The usual sites for this tumor are the skin and the nasopharyngeal and oral mucosal surfaces [4]. It is associated with trauma, pregnancy, and hormonal changes, but the cause has not been clearly identified [5]. It may occur in any age and sex but is predominant in young female adults, probably due to hormonal effects on vessels [6]. Pyogenic Granulomas are very rare in the pyriform fossa of larynx, with barely documented cases. Hence, it is a unique entity.

Case Report

A 50-year-old female with no known comorbidities presented with complaints of foreign body sensation in throat for 2 months. It was insidious in onset, persistent, and progressive, associated with difficulty in swallowing, more for liquids than solids. She had difficulty in breathing in supine & right lateral position which was relieved on lying in left lateral

position. She had no history of odynophagia, otalgia, otorrhoea, tinnitus, or giddiness. On examination of oral cavity, neck, & nose, no gross abnormality was noted. Indirect laryngoscopy revealed a bluish polypoidal mass in the left ventricular fold & covering left aryepiglottic fold. Bilateral vocal cords & arytenoids appeared normal. CECT of neck revealed a well-defined, avid, pedunculated mass lesion with similar enhancement characteristics of adjacent vessels. It was measuring 7.5 × 10 × 10 mm (AP×TR×CC) arising from left aryepiglottic fold and was partially obscuring the left pyriform sinus with maintained fat planes (Fig. 1, 2). She underwent excision of the mass lesion using bipolar cautery. The mass lesion was sent for histopathological examination, which revealed a polypoidal mass lesion lined by stratified squamous epithelium with underlying connective tissue showing lobules of irregularly anastomosing vascular channels & blood vessels of varying caliber, separated by fibrous connective tissue. The vessels were lined by plump endothelial cells & surrounded by pericytes. The histomorphological features were those of a Pyogenic Granuloma (LCH) (Fig. 3, 4). She was subsequently discharged after an uneventful post-operative period. On follow up after 3 months, patient was asymptomatic.

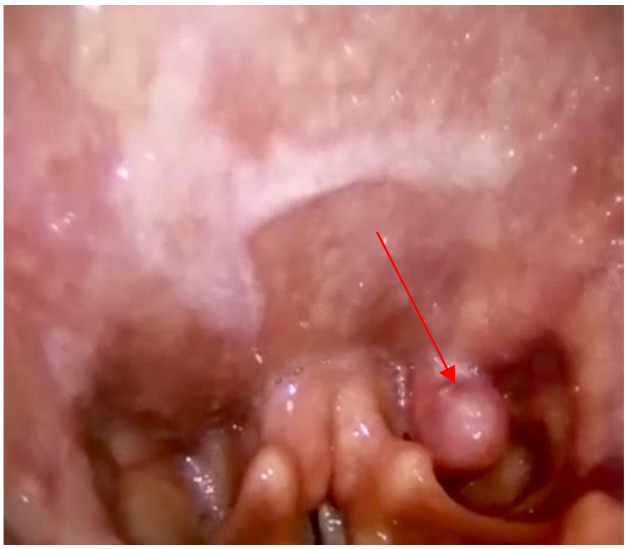

Figure 1: Endoscopic view of swelling in pyriform fossa.

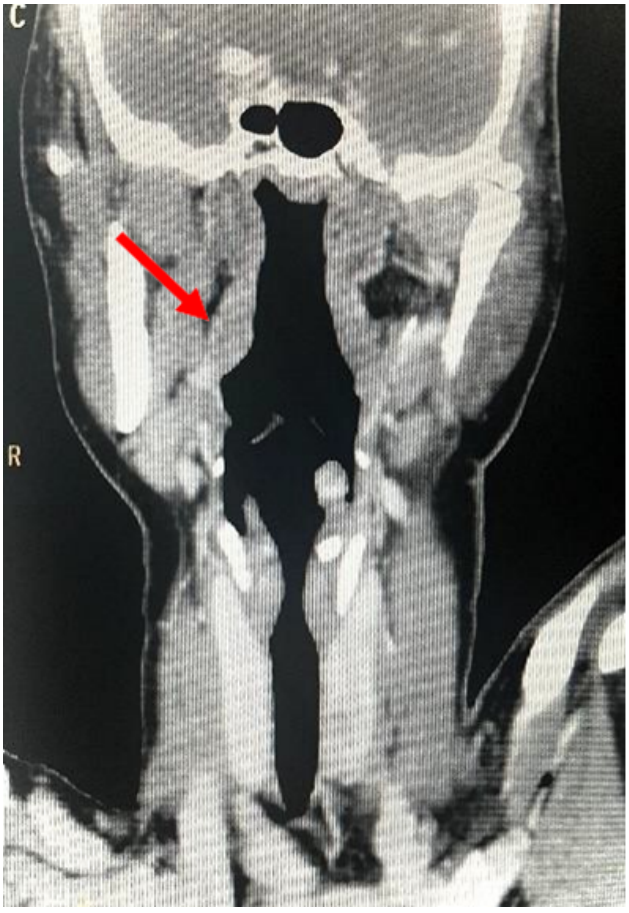

Figure 2: CT image of swelling pyriform fossa.

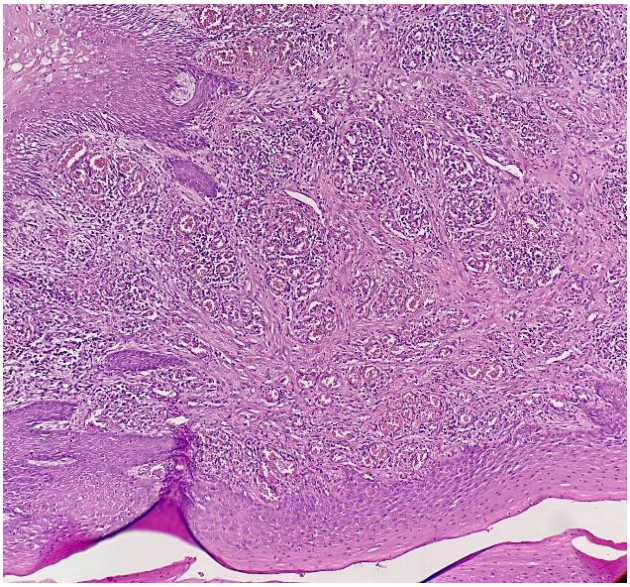

Figure 3: Lobular pattern of capillary proliferation (H&E stain 200×).

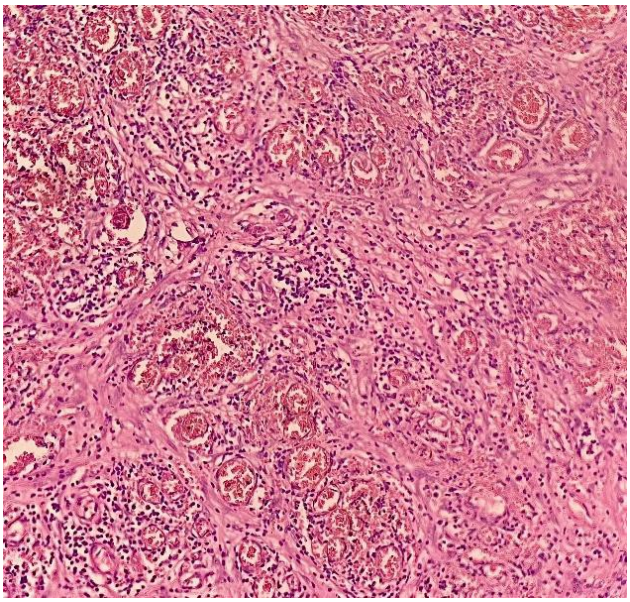

Figure 4: Proliferating blood vessels (H&E stain 400×).

Discussion

Pyogenic granuloma is a benign proliferation of capillary blood vessels adopting a lobular configuration [1]. It is called so because of its reddish and nodular appearance, and is difficult to distinguish from laryngeal granuloma [2]. The term 'pyogenic granuloma' is a misnomer, as the lesion is not of a bacterial origin, nor does it contain purulent material or granulomas. It is a smooth, raised red lesion which may be sessile or have a pedunculated base that varies in size from a few millimeters but rarely exceeds 2.5 cm [3]. It occurs frequently on the skin and oral mucosa, but rarely in the larynx (1%–2%) [7]. It is associated with trauma, pregnancy, and hormonal changes, but the cause has not been clearly identified [5]. It may occur in any age and sex, but is predominantly seen in young female adults, probably due to hormonal effects on vessels [6]. Symptoms can include throat discomfort and hoarseness depending on the location, size, and shape of the mass. Bleeding at the lesion can cause hemoptysis, and dyspnea is also possible if the lesion is large enough to block the airway. Management depends on the severity of symptoms [5].

Based on the clinical symptoms as well as the endoscopy and neck CT, a diagnosis of vascular malformation in our case was established first. Being highly vascular the biopsy of the lesion was controversial in view of risk of bleeding, even though histopathological analysis is the only definitive diagnosis. Biopsy was not performed during the first laryngeal endoscopy due to the high risk of bleeding of the hemangioma. The differential diagnoses of similar lesions includes a spectrum of both benign and malignant entities like granulation tissue, tuberculosis, hemangiopericytoma, angiofibroma, and angiosarcoma. Pyogenic granuloma located in the airways is very rare.

Pyogenic Granuloma is distinguished from hemangioma clinically and histologically based on its lobular growth pattern, fibromyxoid background, overlying ulceration, and acute inflammation [8]. It is also distinguished from other neoplasms on basis of histopathological findings. Consequently, biopsy for histopathology plays a crucial role in diagnosis of this laryngeal lesion and in ruling out other differentials, including malignant ones. It should be considered as one of the differentials when diagnosing cause of dysphagia.

Conclusion

Pyogenic Granuloma should be considered amongst the differential diagnosis when investigating the cause of dysphagia in patients. It has many mimickers on clinical and radiological examination. An excision biopsy and close attention to microscopic details enables correct diagnosis and excludes malignant mimickers. The aim of the case report is to sound clinicians, pathologists and patients about the possibility of this lesion in the pyriform fossa though it is a rare site.

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Competing Interests: None.

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