

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Rare Presentations of Tonsillar Growth: Case Series.

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ABSTRACT

The oropharynx consists of the tonsillar region (pillars and fossae), base of tongue, soft palate, and posterior and lateral oropharyngeal walls. The most distinguishing anatomical characteristic is the location for most of Waldeyer's lymphatic ring, including the palatine and lingual tonsils. Tonsillar malignancy is the second most common malignancy of the head and neck. Carcinoma arising from these sites usually is squamous in origin and is related strongly to smoking, HPV infection and, to a lesser degree, alcohol ingestion. We presented a series of 6 cases of tonsillar growth who presented to the Otorhinolaryngology outpatient department. Patients had different presenting complaints and had to be managed accordingly. Some needed emergency treatment and some needed elective approach. Cases according to their diagnosis by histopathological examination were further managed and patients rehabilitated successfully.

Keywords: Tonsillar growth, Waldeyer's lymphatic ring, non-Hodgkin's lymphoma

<https://doi.org/10.33887/rjpbcs/2024.15.4.28>

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INTRODUCTION

The oropharynx consists of the tonsillar region (pillars and fossae), base of tongue, soft palate, and posterior and lateral oropharyngeal walls. The most distinguishing anatomical characteristic is the location for most of Waldeyer's lymphatic ring, including the palatine and lingual tonsils. Tonsillar malignancy is the second most common malignancy of the head and neck. Carcinoma arising from these sites usually is squamous in origin and is related strongly to smoking, HPV infection and, to a lesser degree, alcohol ingestion [1]. Most commonly, carcinoma affects patients in the fifth to seventh decade in life. The incidence in men is 2 to 5 times greater than the incidence observed in women. Squamous cell carcinoma (SCC) is the most common malignancy and forms 90% of the tumours in this region. Non-Hodgkin's lymphomas account for 8% and minor salivary gland tumours for 2%. With regard to the SCC, the frequency of affected sites is tonsil/lateral wall (60%), tongue base (25%), soft palate (10%), and posterior wall (5%) [2]. Many patients with tonsillar malignancy present with advanced disease because early lesions are generally asymptomatic when small. The lack of symptoms is responsible for 67-77% patients presenting with tumours larger than 2 cm and often with regional node metastasis. At presentation, 45% of anterior tonsillar pillar lesions and 76% of tonsillar fossa lesions have clinically positive neck nodes [2]. The lymphatic drainage from the oropharynx is mainly to levels 2, 3, and 4 of neck nodes in the frequency of 55%, 33%, and 19%, respectively [3-5].

CASE SERIES

Case 1

80-year-old male came with chief complaints of neck swelling for 2 months and difficulty to swallow and breath for 1 week. On examination, there were multiple neck swellings in the neck. Patient consumes tobacco for the past 20 years. In oropharynx, there was a unilateral tonsillar hypertrophy on the right-side crossing midline. Patient was posted for tonsillectomy and on histopathological examination of the tonsil, Non-Hodgkin's Lymphoma was diagnosed. Post recovery patient was sent for chemoradiotherapy at a higher center. 6 monthly post op follow-ups show good recovery.

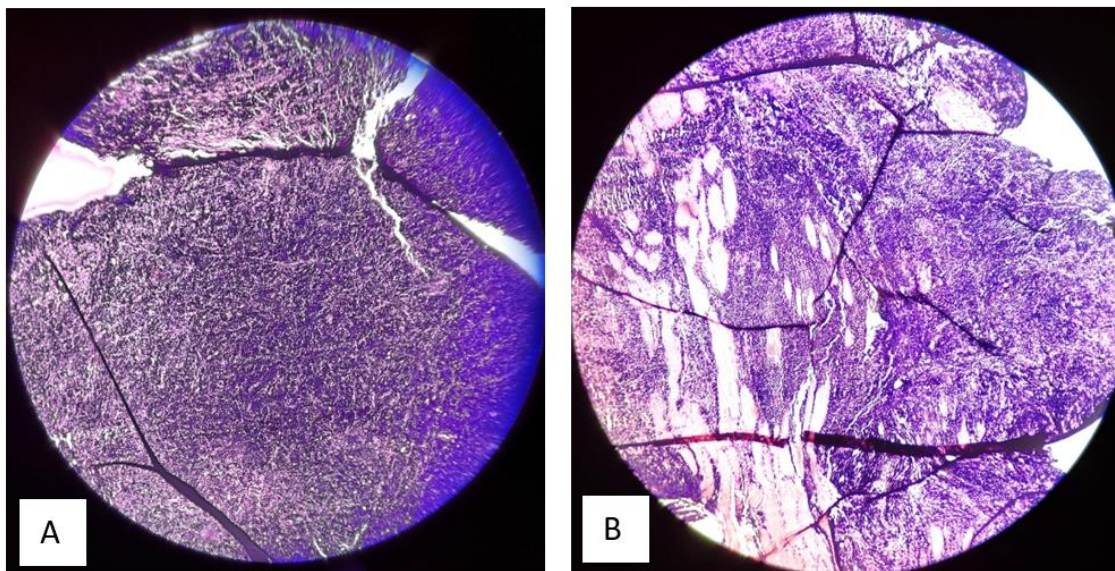


Figure 1: A, B- Histopathological slide showing Non-Hodgkin's lymphoma

Case 2

67-year-old male came with chief complaints of neck swelling for 1 year and difficulty to swallow since 1 month. Patient was seropositive on ART. On examination, there was a growth arising from the left tonsillar fossa extending up to the vallecula obstructing the oropharynx. Patient also had deranged renal function test, so was unable to undergo general anesthesia. Under local anesthesia, biopsy from the tonsil was taken and sent for histopathological analysis which showed squamous cell carcinoma. Patient was

sent for radiotherapy. 1 yearly follow-up shows complete regression of the lesion and patient was devoid of any symptom.

Case 3

27-year-old male came with pain while swallowing for 1 year. Patient had undergone many courses of medications but without any symptomatic relief. On examination, there was bilateral grade 3 tonsillar hypertrophy with whitish spots on the tonsil. Patient underwent tonsillectomy and on histopathological study, it was proven to be tonsillar keratosis.

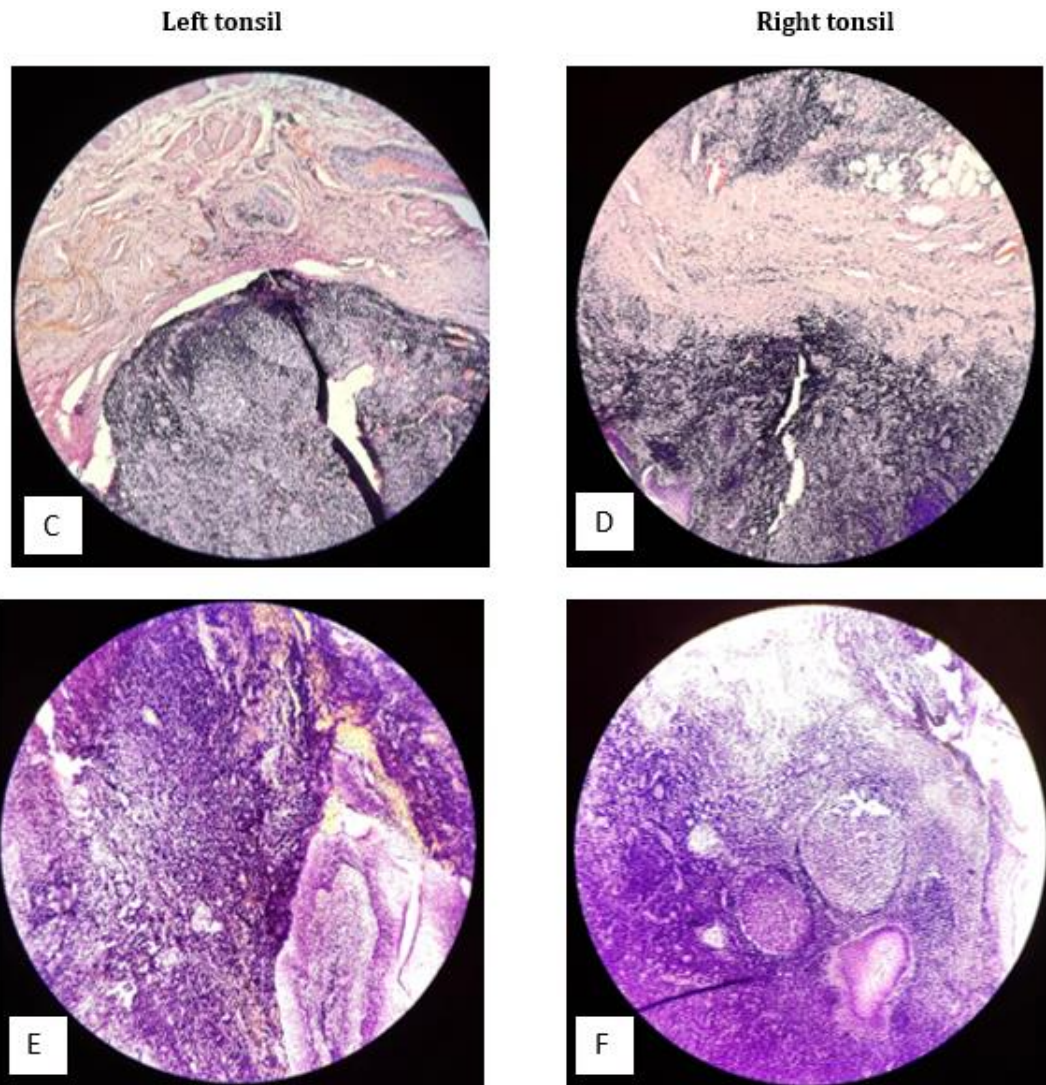


Figure 2: C, D, E, F - Histopathological analysis shows Tonsillar keratosis

Case 4

38-year-old male presented with intermittent stridor and difficulty to swallow since 1 week. On examination, patient had left sided tonsillar hypertrophy which was crossing midline and obstructing the entire oropharynx leading to stridor.

Patient was started on IV antibiotics and size reduced slightly after 2 days. Patient was posted for tonsillectomy and on histopathological analysis, it turned out to be Non-Hodgkin's lymphoma. Patient was sent to higher centre for radio chemotherapy. 6 monthly follow-ups show good recovery.

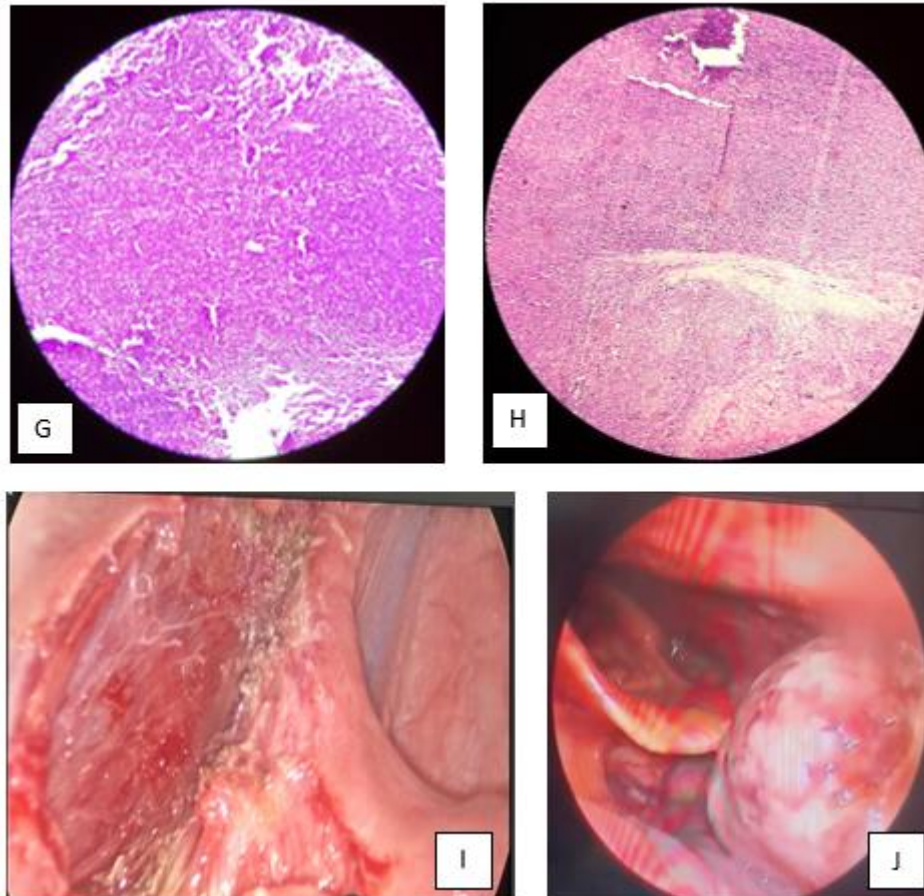


Figure 3: G, H- Histology slide showing Non- Hodgkin's lymphoma

I-Tonsillar bed post tonsillar excision
 J-Tonsillar growth obstructing the oropharynx

Case 5

51-Year-old male patient came with difficulty to swallow since 6 months. On local examination, there was left sided unilateral ulceroproliferative growth on the tonsil extending till posterior pharyngeal wall. There were also enlarged lymph nodes level 2 and 3. Patient was posted for biopsy and HPE results shows squamous cell carcinoma. Patient was referred to a higher centre for further management.

Case 6

34-year-old female presented with odynophagia and complaints of repeated attacks of tonsillitis relieved on medications but no permanent relief. Patient on examination showed unilateral(right) sided tonsillar hypertrophy. Patient was posted for elective tonsillectomy and the specimen sent for histopathological analysis. On analysis, the specimen showed actinomycotic colonies thus diagnosing it to be a case of tonsillar actinomycosis.

6 monthly follow up post-surgery shows good recovery and no complaints.

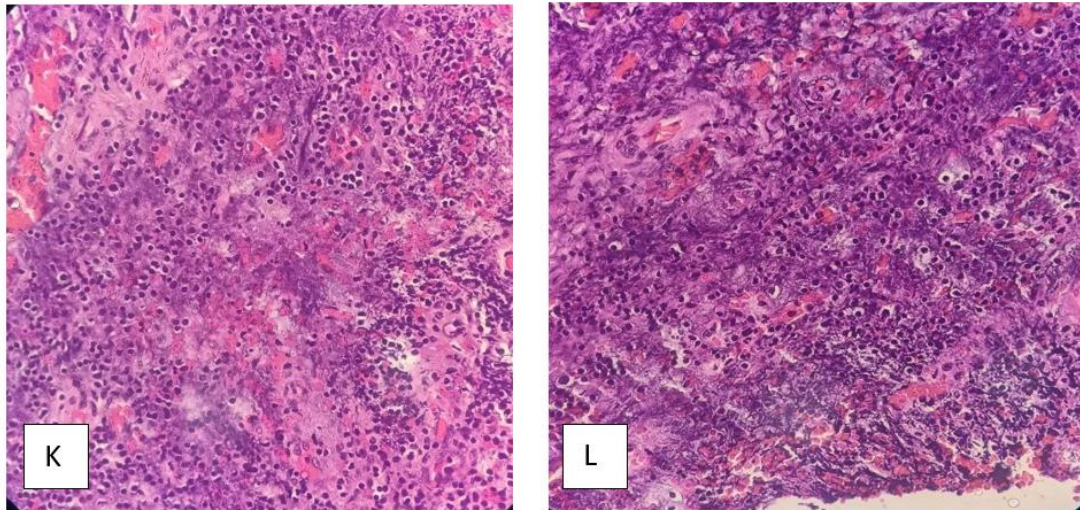


Figure 4: K, L- Histopathological analysis showing actinomycotic colonies in a tonsillar tissue

Table 1: Summary of the cases

Parameters ->	Age	Sex	Symptoms	Diagnosis	Prognosis
Case 1	80	Male	Neck swelling, Dyspnoea	Non-Hodgkin's lymphoma	Good
Case 2	67	Male	Neck swelling, Dysphagia	Squamous cell carcinoma	Poor
Case 3	27	Male	Odynophagia	Tonsillar keratosis	Good
Case 4	38	Male	Stridor, Dysphagia	Non-Hodgkin's lymphoma	Good
Case 5	51	Male	Dysphagia	Squamous cell carcinoma	Poor
Case 6	34	Female	Odynophagia	Tonsillar actinomycosis	Good

DISCUSSION

Several variables are considered when prescribing treatment for patients with oropharyngeal malignancy: The extent of the primary tumor; the tumor grade; the extent of nodal metastases; and the patient's age, general health, occupation, and personal preferences. Classification of carcinoma of tonsil is done prior to treatment modalities. According to UICC 2002, the classification is based on primary tumor (T), presence, size, numbers and localization of regional disease metastasis (N) and distant metastasis or not (M) [6].

Treatment and Prognosis of Squamous Cell Carcinoma of Tonsil.

In stage I-II and some stage III (T1-2, N1) squamous cell carcinoma, external beam irradiation is given to local and regional site to good effect. According to the Liverpool series, it was concluded that tonsillar carcinoma with lymph nodes can be treated by radiotherapy to the tonsillar region and with radical neck dissection if the disease is more than N1 [6]. Radiotherapy as a primary treatment modality in early tonsillar carcinoma and concurrent chemotherapy and radiation therapy is currently standard of care in advanced tonsillar carcinoma [7]. If the tumor is not considered resectable, then radiotherapy with or without chemotherapy is given as the only treatment. The expected 5 year survival rate in early squamous cell carcinoma is 50-90 per cent, whereas in advance stage, it is 20-55 percent [7].

Treatment and Prognosis of Lymphomas of Tonsils among the non-Hodgkin lymphomas (NHL) found in Waldeyer's ring, the tonsils are the primary location for the disease in 80% of the cases. Endo et al., who analyzed 38 cases of primary tonsillar NHL, concluded that in patients with stage I or II tonsillar lymphomas with bulky tumor mass, chemotherapy followed by radiotherapy might be the choice of

treatment [8]. A 5-year survival rate of 65–85% for patients with early-stage presentation has been reported [9]. Another important prognostic factor considered for primary extranodal lymphomas is their location [10]. Foul smelling removable tonsillar concretions were found to be a manifestation of tonsillar colonisation with actinomycosis.[11]. The pathogenesis of actinomycosis is not clear. The consensus seems to be that it is an endogenous infection which is not communicable. Trauma seems to play a role in most cases, initiating the portal of entry for the organism [12]; the toughness and integrity of the mucous membrane is important in the body's defence against infections. This mechanical barrier is weakest at two points: the gingival margin and the tonsillar crypts, where the epithelium is very thin and easily traumatised. The tonsils and the gingivae are the places where infections occurs when the general body defence mechanism is impaired [13]. Incidentally Actinomycetes inhabit these sites so any mucosal breaks in the tonsillar crypts will allow Actinomycetes to proliferate. Another possibility is that a local invasion of the tonsillar crypts by Actinomyces damages the integrity of the mucous membrane and body's defence thereby providing a portal of entry for other pathogens.

CONCLUSION

Primary lymphoma involving the tonsils is a rare malignancy and it is difficult for clinicians to make a correct diagnosis timely based on the physical examination alone. Currently, multiple imaging modalities have been used in the differential diagnosis of oropharyngeal diseases. Ultrasound can clearly show the features of primary lymphoma of the tonsils and could be a useful imaging modality in diagnosing oropharyngeal diseases. However, a definitive diagnosis can be established only by histopathology. With increasing incidence of tonsillar malignancy in the recent years, early identification of tonsillar growth as malignancy followed by chemo-radiotherapy with dose and field size adjusted to the extent of the disease combined with surgery in advanced cases provides improved results.

Any unilateral tonsillar mass should be evaluated thoroughly and sent for histopathological excision post tonsillectomy for proper diagnosis.

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