



UNILATERAL TONSILLAR ENLARGEMENT – A CASE SERIES

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ABSTRACT

Unilateral Tonsillar Enlargement is more common in adult age group and is increasingly seen in the Department of Ear, Nose & Throat. Frequently these patients are listed for tonsillectomy for the purpose of ruling out malignancy. Since most of the cases of Unilateral Tonsillar Enlargement are benign pathology, tonsillectomy for these patients was decided on the basis of risk factors avoiding unnecessary surgical intervention for all patients.

Materials and methods

We reviewed 108 patients who underwent tonsillectomies from 2011 to 2012 of which 7 (seven) cases were done due to asymmetry in tonsil. All the risk factors for malignancy like Cervical lymph node enlargement, Sex, Age, Tonsillar size were evaluated and out of 11 (eleven) cases of Unilateral Tonsillar Enlargement during the study period 2011 – 2012, 7 (seven) were taken up for surgery.

Results

Histo pathological evaluation showed 85.7% to be benign and 14.3% to be malignant. In our study, the alarming risk factor was cervical lymph node enlargement and alcohol consumption.

Conclusion

Lymphomas are the commonest cause of Unilateral Tonsillar Enlargement but all Unilateral Tonsillar Enlargements are not lymphomas. Therefore strict evaluation of all risk factors is mandatory before exposing patients to surgeries like tonsillectomy.

KEYWORDS: Unilateral Tonsillar Enlargement , Tonsillectomy, Lymphomas



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INTRODUCTION

Tonsils are lymphoid tissue seen on either sides of Oropharynx. They are primarily made of B lymphocytes and are lined by stratified squamous epithelium. They do not filter lymph and have no afferent lymphatic channels. Their main function is production of antibodies, gamma interferon and lymphokines. Unilateral Tonsillar Enlargement can be due to Infection (Tuberculosis, syphilis, actinomycoses, sarcoidosis^[1]), Chronic inflammatory response, Benign tumours (papilloma^[2]), Reactive immunological response to a nearby primary tumour in cervical lymphnode and Malignancy . Apart from various benign and malignant etiological factors there are some anatomical factors which play a role in tonsil asymmetry like varying depth of tonsillar fossa, asymmetry in anterior pillars. The most common malignancy of tonsil is Squamous cell carcinoma which usually presents with ulceration of mucosa. Lymphoma usually appears as sub mucosal mass causing asymmetrical increase in size of amygdala. Various studies have been done for Unilateral Tonsillar Enlargement regarding the

modalities of treatment –medical management and regular follow up or surgical management by Tonsillectomy and Biopsy. Surgery has a central role in the management of cancer because it is often the most effective therapy in achieving cure^[10]. For some types of cancer this is all that is needed for a good outcome. Several risk factors play vital role in deciding the treatment to avoid unnecessary surgery and its complications. In our study, we correlate the risk factors in patients with Unilateral Tonsillar Enlargement to decide on the need for surgery.

MATERIALS AND METHODS

This is a retrospective study of 108 consecutive tonsillectomies carried out in our Department. Tonsillar asymmetry with mucosal ulceration are totally excluded from our study of the 108 cases, 7 cases were indicated due to tonsillar asymmetry. Palatine tonsils were ranked according to scheme proposed by BRODSKY'S CLASSIFICATION.

TABLE 1
GRADING- BRODSKY

GRADE	LEVEL OF OBSTRUCTION
0	No Airway Obstruction
1	Less than 25%
2	25%-50%
3	50%-75%
4	More than 75%

Difference of degree 1 or more between palatine tonsils was considered to be of asymmetric tonsils. Among our eleven patients of Unilateral Tonsillar Enlargement, 8 were men and 3 were women ranging from age 7-55 years. Average mean age 32 years. Tonsillectomy was done under General Anaesthesia by Dissection and Snare method. The specimen was placed in 10% formaldehyde and sent for Histopathological Examination. The materials were blocked in Paraffin after dehydration with formaldehyde for 24 hours. Specimen was cut 5mm and stained with Eosin and Haematoxylin stains. Histopathological evaluation were done by

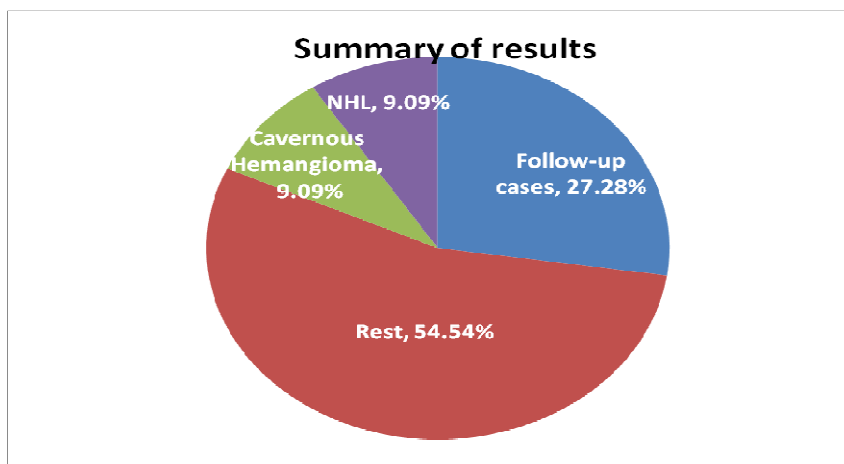
trained pathologist in Department of Pathology.

RESULTS

Out of 108 tonsillectomies done in our department, 7 were operated for asymmetrical enlargement which constitutes 10.19% of total cases. Biopsy showed 85.7% benign [benign lymphoid hyperplasia] and 14.3% malignant [Non Hodgkins Lymphoma]. On further analysing the risk factor associated with such cases, 63.63% had cervical lymphadenopathy and 9.09% had alcohol and smoking habits with other constitutional symptoms. In our

study, 7 cases underwent surgery of which 5 are male 2 are female which again showed higher incidence of Unilateral Tonsillar Enlargement in male. With respect to age factors, our patients ranged from 6-55 years with mean age 32 years. Though Tonsillar asymmetry should be studied irrespective of age, however in our study we found that patients above 40 years of age showed a higher incidence (72.7%) when compared to younger individuals. Cervical lymphadenopathy was noted in about 63.6% of patients with Unilateral Tonsillar Enlargement. 9% patients with Unilateral Tonsillar Enlargement were found to be consuming alcohol and smoking tobacco. Constitutional symptoms like fever, malaise, loss of weight and appetite comprised of 9%

of total cases. Various literature and authors have suggested immune compromised state and pre malignant conditions as risk factors but in our study there was no correlation made with immunodeficiency disorders or previous history of malignancy as none of our patients reported with these two. Tonsillectomy was done under G/A by dissection and snare method. The specimen was placed in glass container with 10 % formaldehyde and sent for histopathological examination. In our study we would like to conclude that all cases of Unilateral Tonsillar Enlargement does not require surgery. All cases require proper analysis of all risk factors and treatment modality should depend on individual case. Regular monitoring and counselling is a must for all such patients to prevent complication.



DISCUSSION

Unilateral Tonsillar Enlargement can occur due to various etiologies including Infections, Granulomatous diseases, Benign and Malignant neoplasms. Squamous cell carcinoma, and lymphoma (lymphocytic and histocytic) are the common neoplasms affecting the tonsil. Lymphatic system of human body consist of lymph, lymph node and lymphoid tissue. Tonsils are lymphatic tissue seen in the Waldeyer ring which is the commonest extra nodal manifestation of Non Hodgkins Lymphoma. Tumors of lymphatic sytem are called as lymphoma which are broadly classified in to Hodgkins and Non Hodgkins Lymphoma. Non Hodgkins Lymphoma are group of blood cancers which includes all lymphoma except

Hodgkins lymphoma. Non Hodgkins Lymphoma can occur in any part of the body as lymphatic system is found almost everywhere. Non Hodgkin's Lymphoma can be nodal and extranodal and the commonest extranodal site is Waldeyers ring. The extranodal involvement in head and neck occurs in 10 to 30 % and waldeyers ring is involved in 60 to 70% of such cases^[3]. 80 % of Non Hodgkin's Lymphoma that affects the Waldeyers ring involves the palatine tonsil. Tonsillar asymmetry is considered to be a main clinical finding of lymphomas of tonsil in children^[4]. Asymmetry of tonsil should always raise the suspicion of malignancy. The commonest carcinoma of aerodigestive tract is the squamous cell carcinoma but Unilateral Tonsillar Enlargement is commonly caused by lymphomas. Lymphomas usually present as

submucosal masses resulting in the asymmetry in the size of tonsil. Reactive immunological response for primary tumours in cervical lymph node can cause hypertrophy of the tonsil due to blockage of lymphatic channel by the tumour antigen. In Such cases of Unilateral Tonsillar Enlargement there is a reactive hypertrophy of tonsil due to a primary malignancy elsewhere. In our study we have tried to assess the percentage Unilateral Tonsillar Enlargement among the routine cases of chronic tonsillitis and percentage of patients who require tonsillectomies for Unilateral Tonsillar Enlargement. We did 108 tonsillectomies during study period of 2011 to 2012, of which 7 cases were for Unilateral Tonsillar Enlargement (6.5%). Out of our 11 cases, 3 cases had tonsillar hypertrophy on one side with no associated risk factors including lymphadenopathy. All this patients

are under regular follow up till now. They have been counselled regarding the disease and the need for clinical evaluation. One case had purplish uniform mass filling the right tonsil with no associated lymphadenopathy. The mass was confined to tonsillar tissue with no extension. All other systemic and clinical evaluation was normal, Clinical diagnosis of Cavernous Haemangioma of right tonsil was made and patient is on follow up till date. Out of the 7 cases who underwent tonsillectomy 6 cases were reported as Benign tonsillar hyperplasia and no treatment was advised. One case was proved to have Non Hodgkins Lymphoma and is on CHOP regimen. From our study we think regular monitoring and patient counselling for patients with Unilateral Tonsillar Enlargement with no associated risk factors [table 2].

Risk factors	case1	case2	case3	case4	Case5	Case6	Case7
Cervical lymphnode	+	+	+	+	+	+	+
Male gender	+	+	-	+	+	-	+
>45 years	-	+	+	+	+	-	-
Tonsillar tissue	mass	mass	mass	mass	mass	Mass	Mass
Constitutional symptoms	-	+	-	-	-	-	-
Tobacco/alcohol	-	+	-	-	-	-	-
Immunodeficiency	-	-	-	-	-	-	-
Previous malignancy	-	-	-	-	-	-	-

Table 2
Risk factors and association with UTE

In a study done by Spinou et al^[2] relationship between malignancy and mucosal ulceration, constitutional symptoms, adult male and cervical lymphadenopathy has been established. Cinar^[5] proposes doubtful appearance of amygdale, loss of weight, fever, cervical lymphadenopathy, previous history of immunodeficiency as risk factors. In a study done by shah et al^[6]. FNAB is considered as a safe and effective method in diagnosing lymphomas and Squamous cell carcinoma. They have reported as sensitivity of 93% and specificity of 86% in FNABs compared to conventional biopsies. According to their study FNAB is better for sub mucosal lesions where conventional tonsillectomies are contra indicated for other reasons. But in

cases where there is partial affection of amygdale from non involved site can lead to misdiagnosis. Another study^[7] recommends routine excision of abnormally large asymmetrical tonsils after giving a clear understanding of the risks and benefits of the surgery solely for asymmetry to the patient. Various studies have shown a clear correlation between degree of Immunosuppression and risk of developing Non Hodgkins Lymphoma and immuno suppression has been considered in the pathogenesis of Non Hodgkins Lymphoma. But in our case of Non Hodgkins Lymphoma diagnosed among cases of Unilateral Tonsillar Enlargement

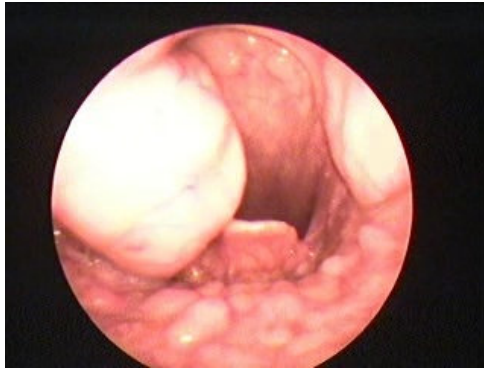


Figure 1
Endoscopic picture showing Tonsillar enlargement of right side obscuring the view of vallecula

patient had no evidence of immunological suppression [Figure 1]. Various studies have been done to prove the association of risk factors in cases of Unilateral Tonsillar Enlargement. All cases need not be considered for tonsillectomies and there are certain risk factors postulated to be reviewed before deciding on the mode of treatment. Various risk factors are Palpable cervical lymph nodes on the side of tonsillar enlargement, Doubtful appearance of tonsillar tissue including mass, ulceration and colour changes, Constitutional symptoms including fever, night sweats, weight loss, immunodeficiency states, Prior history of malignancy and demographic criterias like age and gender. In a study conducted by Beaty et al.^[8] he postulated that all risk factors were significantly important in all cases of Unilateral Tonsillar Enlargement and higher the number of risk factors more is the risk of malignancy.

CONCLUSION

Unilateral Tonsillar Enlargement are not always infectious in origin and there is no proved age factor for it. Unilateral Tonsillar Enlargement in children is considered as a dangerous sign of possibility of underlying lymphoma^[9]. There are various risk factors postulated for diagnosing Non Hodgkins Lymphoma in cases of Unilateral Tonsillar Enlargement. Non Hodgkins Lymphoma can present with isolated tonsillar enlargement or can be associated with one or more risk factors. Therefore systematic, clinical and radiological evaluation should be done in patients with Unilateral Tonsillar Enlargement keeping in mind all the risk factors associated with it. Patients are decided on the mode of treatment like regular follow up or surgery depending on the clinical evaluation. All cases of Unilateral Tonsillar Enlargement should be regularly followed up until the diagnosis has been ruled out so that potential devastating consequences has not been missed thereby preventing dangerous outcomes of malignancy.

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