INTRODUCTION: Acute infection of the tonsils is a very common condition encountered in medical practice. It occurs in all age groups but is more frequent during childhood because of poor immunity against common pathogens in the environment. The disease is rare in infancy because of less exposure to outside environment and after the age of 50 because of degenerative changes and regression of lymphoid tissue. Clinically, acute tonsillitis may present in one of the three forms.

1. Acute follicular tonsillitis (Inflammatory exudations from the crypts mark the reddened surface with whitish or yellowish spots.
2. Acute parenchymatous tonsillitis, when the whole tonsil is congested, red and swollen.
3. Acute membranous tonsillitis, in this case exudation from the adjoining crypts coalesce to form a false membrane over the surface of the tonsil which can be easily picked up from the surface. Both general practitioners and ENT specialists handle a substantial number of such cases in their routine clinical practice.

Majority of these infections are viral in nature, while only 15-20% is bacterial. Viruses like influenza, para-influenza, adenovirus, enterovirus, rhinovirus and Epstein-Barr virus have been implicated. The commonest bacterium implicated in acute tonsillitis is group A beta-hemolytic streptococcus (GABHS). This organism has been isolated from only 30% cases of acute tonsillitis. Streplococci other than GABHS, staphylococcus aureus, haemophilus influenza have also been found to be the culprits of acute tonsillitis. Post Bacterial and viral tonsillitis tend to resolve quickly without treatment in most cases. Antibiotics have a limited role in the treatment of these self-limiting infections. Oral fluids, analgesics and bed rest are often all that may be required. Paracetamol in full doses is often adequate. Despite this, a large number of patients with such infections were prescribed antibiotics, probably because of the common belief among patients as well as some clinicians that antibiotics hasten the process of recovery. This lack of a standard protocol in the management of acute follicular tonsillitis prompted this study so as to compare any difference in the time required for recovery when antibiotics are prescribed and otherwise.

SUBJECTS AND METHODS: This comparative (analytical) study was carried out at the department of ENT, Combined Military Hospital Peshawar, from 1st Jan 2008 to 30th June 2008. A total of 60 diagnosed patients of acute follicular tonsillitis were recruited for the study. (Protocol –B). Number of days required for complete recovery was recorded and the two groups compared. RESULTS: There was no significant difference in terms of days among the two groups, p=0.0001.

CONCLUSION: Rate of antibiotic prescription for acute follicular tonsillitis in our primary care clinics is alarmingly high. To change this unscientific trend, implementation of evidence based practice and education of both the patients & health care personnel is imperative.

Key Words: Tonsillitis, Antibiotics, Cost effectiveness, Analgesics.

ABSTRACT: OBJECTIVES: To compare any difference in the time required for recovery in cases of acute follicular tonsillitis, when antibiotics are prescribed and otherwise. DESIGN: A comparative (analytical) study. PLACE & DURATION: Department of ENT/Head & neck surgery, Combined Military Hospital Peshawar, from 1st Jan 2008 to 30th June 2008. SUBJECTS AND METHODS: 60 diagnosed cases of acute follicular tonsillitis of either gender, aged 18 to 33 years were divided randomly into two groups (A and B). Group-A was treated with Injection Benzyl penicillin I/M, Paracetamol, oral fluids and Infusion 5% Dextrose water (Protocol –A). Injection Benzyl penicillin was withheld from Group-B patients, while rest of the treatment remained the same. (Protocol –B). RESULTS: There was no significant difference in terms of days among the two groups. p=0.0001. CONCLUSION: Rate of antibiotic prescription for acute follicular tonsillitis in our primary care clinics, is alarmingly high. To change this unscientific trend, implementation of evidence based practice and education of both the patients & health care personnel is imperative.

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Group-B was treated with Paracetamol 500mg, 2 tablets 6 hourly, oral fluids and Infusion 5% Dextrose water I/V 12 hourly. (Protocol –B). Only two patients were excluded from the study, which got no response in protocol-B after 72 hours. All patients were examined on the first visit in ENT OPD. After diagnosis of acute follicular tonsillitis, they were admitted to the ENT ward. Throat swab was submitted for culture & sensitivity and blood was sent to laboratory for total leucocyte count (TLC) and differential leucocyte count (DLC). Each patient was examined daily. Temperature, pain, congestion and odynophagia (on a scale of 1-10) were recorded 6 hourly.

Number of days required for complete recovery was recorded. Complete recovery was labeled once it was established that the patient had no fever, follicles, tonsillar congestion and that they were free of sore throat and odynophagia. The data was analyzed using SPSS-11 software. T-test was applied for determining statistical significance of the results. A value of p = 0.05 was considered as significant.

RESULTS: The patients’ ages in group A ranged from 18 to 31 years (mean age 26 years); while in group B it was 18 to 33 years (mean age 27 years). Male: female was 1.2:1. The breakdown of culture sensitivity reports of throat swabs of both groups are given in (Table 1).

Table 1: Results of Culture sensitivity of throat swabs.

<table>
<thead>
<tr>
<th>Throat swab C/S</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal flora</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td>No organism</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

There was no significant difference in complete recovery in terms of days among the two groups. Number of days for complete recovery in case of Group-A was 5.80 days while it was 5.83 for Group-B which shows little or no benefit of antibiotics in hastening the recovery in acute follicular tonsillitis. P=<0.0001. Complete recovery was observed in 40% patients (12/30) within 05 days in both groups and in 100% patients (30/30) in both groups within 7 days (Table 2). Tables 3-6 illustrate the daily average temperature charting, presence of pain, visualization of tonsillar pus follicles and Odynophagia. The breakdown of complete recovery in both groups is illustrated in (Fig1).

DISCUSSION: A review of Pub med and Cochrane databases revealed no study with a design similar to ours. Discussion will therefore be confined to those studies in which antibiotics alone were prescribed. The reasons why antibiotics are prescribed for a disease which has a predominantly viral etiology and is self limiting in nature, are multifactorial. Many social and cultural factors are involved. First and foremost is the belief amongst primary care physicians that antibiotics shorten the duration of disease. There is little scientific

![Figure1: Complete recovery in both groups versus days of treatment.](image)

![Table 5: Daily charting of presence of tonsillar pus follicles. Group A=30. Group B=30.](table)

![Table 6: Daily charting of Odynophagia on pain scale (1-10). Group A=30. Group B=30.](table)
justification for this notion; many researchers have demonstrated that antibiotics provide only a marginal advantage in the treatment of such cases. Over-prescription of antibiotics for the treatment of acute follicular tonsillitis is very common. This predication is not limited to Pakistan and has been frequently reported from various parts of the world. Even in United States majority of antibiotics are prescribed for cases of acute follicular tonsillitis. There are similar reports from UK, Netherlands and New Zealand. In Cochrane data-base analysis of more than 11000 patients, it was found that antibiotics shorten the duration of symptoms, but by a mean of only one day, about halfway through the illness (the time of maximal effect) and by about sixteen hours over all. This agrees with our findings. Antibiotic prescription is also related to patient's satisfaction and at times the clinician may prescribe antibiotics for maintaining good relations with the patient. The injudicious use of antibiotics has several disadvantages; they disturb normal flora and lead to emergence of resistant strains. Antibiotic resistance amongst common respiratory infection producing bacteria such as Streptococcus pneumoniae, Haemophilus influenza and Moraxella catarrhalis has become a major global public health problem. This is particularly true for Streptococcus Pneumoniae, the resistance to which has reached epidemic proportions. One study carried at Aga Khan University Pakistan has shown high levels of resistance to Ampicillin, Co-trimoxazole, Chloramphenicol and Erythromycin. Resistance is not the only problem; every antibiotic has its own side effects. In the current economic scenario wastage of money on antibiotics for a self-limiting illness can hardly be justified. A study carried out in Pakistan in 1996 showed that elimination of inappropriate antibiotic therapy in cases of ARI alone, has the potential to save Rs.39.8 million (US$1.2 million) from Pakistan's public health budget each year. Considering all these disadvantages, there is a need for an effective campaign to apprise both patients and health care professionals about the ill effects and disadvantages of antibiotics. The patients should be apprised of the fact that antibiotic provide only a marginal benefit, which is outweighed by their disadvantages. The least, one can do is to prescribe a short course of antibiotics, rather than traditional 10-days therapy; it has been reported that short course of antibiotics is as effective as a long course. A British study divided children with tonsillitis into 3 groups. One group was given 10 days of antibiotic, the 2nd group was given none and the 3rd group was given a prescription and told to use it only if symptoms did not settle by the 3rd day. There was no difference in outcome between the 3 groups and in the 3rd group only 69% used the prescription. Data from Pakistan is scanty; one small study carried out at Attock showed 62% rate of prescription of antibiotics. The same researchers have found that General practitioners in private sector prescribe more antibiotics as compared to the public sector. Although there is a multitude of newer antibiotics to choose from, yet in our study Benzyl penicillin was selected as the primary antibiotic for several reasons i.e. it acts effectively against all Gram-positive pathogens, most Gram-negative cocci and some spirochetes and actinomycetes. This antibiotic shows excellent tissue penetration in the body and is inexpensive when compared with other antibiotics. Following the flooding of market with newer generation antibiotics, it is being sparingly prescribed for several years, with the hypothetical conclusion that its resistance must have plummeted.

**CONCLUSION:** Rate of antibiotic prescription for acute follicular tonsillitis in our primary care clinics, is alarmingly high. There is a dire need to change this unscientific trend. Among the many disadvantages of injudicious prescription of antibiotics, emergence of resistant strains is most critical. Implementation of evidence based practice and education of both the patients & health care personnel is of the essence.

**REFERENCES:**

Treating Acute Follicular Tonsillitis In Adults


