THE LIMITED ROLE OF ANTIBIOTICS IN THE MANAGEMENT OF CHRONIC SORE THROAT IN ADULTS

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Objectives: The aim of this study is to find the cause of chronic sore throat (CST) and to demonstrate the percentage of patients who may benefit from treatment with antibiotics by clinical, laboratory and radiological evaluation.

Design: A prospective study (March-June 1996).

Setting: Queen Alia Military Hospital (QAMH) in Amman, Jordan.

Results: Among the 94 patients, only 25 patients (26.6%) showed chronic infection; 18 (19.1%) had chronic sinusitis and 7 (7.5%) had chronic tonsillitis; those 25 patients may benefit from antibiotics. The remaining 69 (73.4%) did not have any evidence of infection, therefore antibiotics use in such patients cannot be justified.

The main cause of CST in 87 (92.5%) patients is mechanical in nature with continuous irritation of pharyngeal mucosa.

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Sore throat is one of the most common conditions encountered in medicine, in the United States tonsillopharyngitis accounts for 40 million annual visits to medical facilities with consequent loss of about 100 million workdays[1].

Sore throat can be acute or chronic, acute conditions are usually due to infection either viral or bacterial and raise little problems in their management, acute or recurrent tonsillitis are usually treated with penicillin, although clindamycin and erythromycin have been recommended[1-3].

In dealing with a patient with CST many difficulties are faced in reaching a correct diagnosis and recommendation of proper treatment; antibiotics are often prescribed without benefit; simply because of the absence of an infectious process in the majority of cases.

This category of patient needs full clinical, laboratory and radiological examination to exclude malignancy, chronic specific infection like syphilis and TB[4], and to demonstrate the cause of their symptoms and to manage appropriately.

METHODS

This is a prospective study done at the ENT department at QAMH in the period of March-June 1996, where 94 patients; 54 (57.4%) males and 40 (42.6%) females, were referred because of long standing sore throat.

Patients with recurrent acute attacks were excluded. Their age was ranging between 16-66 years (Mean 30.4 years). Patients were asked to stop taking medicine for two weeks prior to evaluation.

A special chart was designed (Table 1), where patients' name, age and sex were recorded.

Table 1. **Findings obtained for analysis**

Name	Age	Sex
Habits	P.Hx	
Main complaints		
Other complaints		
Clinical Findings:	Temperature	
	Throat	
	Nose	
CBC	WBS	Diff.count
	PCV	
	ESR	
Throat Swab		
Sinuses X-ray		
Conclusion		

Related habits like smoking and alcohol consumption were recorded when present.

Patients were asked about other complaints related to the ear, nose and throat and were recorded.

Patients were examined clinically, clinical findings in the throat and nose were recorded.

Blood samples for white blood cells, differential count, packed cell volume and Erythrocyte sedimentation rate were obtained.

Radiological examination of the sinuses were done for all patients. Surface throat swab was taken by scraping the swap with the most congested area in the oropharynx. Findings obtained were analysed.

RESULTS

All patients have long standing sore throat for which they received multiple courses of antibiotics without improvement.

Eighty seven (92.5%) patients have associated nasal symptoms when asked about, these include nasal blockage, rhinorrhea and itching. Smoking and dust exposure were present in 36 (38%) patients.

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Six (6.4%) patients had their tonsils removed. On clinical examination, all patients were afebrile inspite of the presence of congested throat.

Table 2. **Clinical findings in the throat**

Clinical findings	No. of patients	%
Diffuse congestion	69	73.4
Nodular pharyngitis	25	27
Post nasal drip	13	14
Chronic tonsillitis	7	7.4

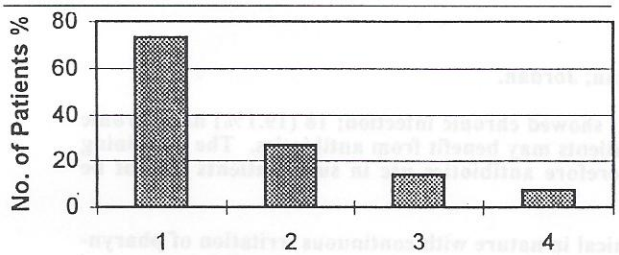

Figure 1. Clinical findings in the throat

Clinical findings in the throat are shown in table 2 and figure 1. The most prominent feature present in 69 (73.4%) patients in diffuse congestion of oropharyngeal mucosa especially the anterior pillars and posterior pharyngeal wall.

Patients with chronic tonsillitis, 7 (7.5%) were diagnosed when congestion was localised to the tonsils which are enlarged with dilated crypts filled with debris, those patients have persisted sore throat with history of recurrent short lived exacerbations. Clinical findings in the nose are shown in table 3 and figure 2.

Table 3. **Clinical findings in the nose**

Clinical findings	No. of patients	%
Enlarged inferior, turbinates	60	63.8
Deviated nasal septum	28	29.8
Pale nasal mucosa	22	23.4
Nasal polyps	7	7.4

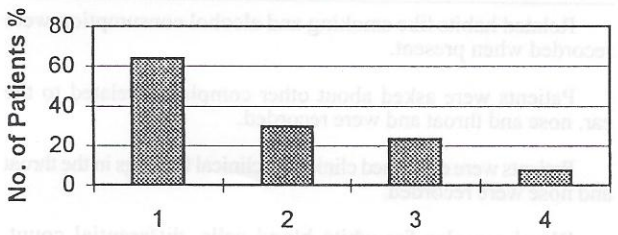

Figure 2. Clinical findings in the nose

These findings lead to nasal obstruction and increased nasal secretion manifested by mouth breathing and postnasal discharge which cause continuous irritation of pharyngeal mucosa.

Patients with chronic sinusitis were diagnosed on clinical and radiological examinations. Surface throat swab showed normal flora in all patients. Blood analysis did not show any remarkable findings.

DISCUSSION

The oropharynx forms common pathway to aero-digestive tracts, it is surrounded by aggregation of lymphatic tissue known as waldeyer ring, due to its position it is frequently exposed to pathogens causing local inflammation.

In 92.5 % of our patients, the cause of CST is mechanical due to nasal obstruction and smoking.

Nasal obstruction leads to mouth breathing, therefore loss of physiological functions of the nose in preparing the inspired air to reach the pharyngeal mucosa in optimal conditions; these functions are heat exchange, humidification and filtration[5], direct contact of unprepared air with pharyngeal mucosa results in continuous process of irritation, which is also produced by smoking and dust exposure.

Irritation of oro-pharyngeal mucosa is also produced by increased post nasal discharge due to the presence of rhinosinusitis.

Even in patients with chronic tonsillitis whatever the underlying mechanism the chronically inflammed tonsil contain more scar tissue following each infection[6], in consequence this situation causes an impairment of antibiotic penetrability into their core, a failure of treatment may also be induced by the presence of B-lactamase producing organisms, these organisms can degrade penicillin, in the area of infection, thus protecting not only themselves but also other penicillin sensitive organisms[7,8].

Although previous studies have shown that surface does not reliably predict core pathogens[9,10], surface throat swabs were taken and showed normal flora in all patients.

CONCLUSION

We can see obviously that CST in the majority of patients is non-infective and the empirical use of antibiotics in treating CST causes substantial economic loss with limited benefit to the patient.

This group of patients, need to referred to ENT clinic for full evaluation, treatment options depend on determination of the real cause.

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