ANTIHISTAMINES IN ALLERGIC RHINITIS - A COMPARATIVE ANALYSIS

Dear Editor,

Allergic Rhinitis is a very common clinical entity which occurs when genetically susceptible individuals experience an IgE antibody related response to allergens. Allergic rhinitis needs to be differentiated clinically from nonallergic or vasomotor rhinitis. The symptoms of sneezing, nasal and ocular itching are found to be more predominant in allergic rhinitis while rhinorrhoea and nasal obstruction are more predominant in vasomotor rhinitis [1]. Antihistamines are the mainstay of treatment of allergic rhinitis, they act by blocking histamine receptors or by inhibiting reuptake of noradrenaline from nerve terminals thus producing sympathomimetic effects resulting in relief of rhinorrhoea and nasal obstruction [2].

A large number of antihistamines are currently available for treatment of allergic rhinitis. Choosing an antihistamine for a patient of allergic rhinitis is always a dilemma. To test the efficacy of various antihistamines, a clinical trial was carried out at our hospital to compare the efficacy, safety and side effects of various antihistamines both of first and second generations. 75 established cases of allergic rhinitis were randomly treated with various antihistamines. Prior to starting the treatment, complete ENT and general examination was done. All patients had routine blood and urine analysis along with the skiagrams of the paranasal sinuses. The patients were divided into three groups. The first group was treated with first generation antihistamines, the second group with second generation antihistamines and the third group with topical antihistamines. The patients were reviewed weekly, their symptoms were assessed on a three point scoring scale ie, + indicating low response, ++ for moderate response and +++ indicating good response. The different symptoms of rhinorrhoea, sneezing, nasal itching, nasal obstruction, and ocular itching were studied. The patients were especially asked about side effects such as dryness of mouth, drowsiness, sedation and inability to concentrate.

The results of this study carried were analysed and are summarised in Table-1. All patients in the group treated with first generation antihistamines had moderate improvement in allergic symptoms but had associated side effect of sedation and dryness of mouth. Those treated with second generation antihistamines, had improvement in symptoms of sneezing and nasal itching but with little control of rhinorrhoea. In both these groups however nasal obstruc-

tion was not significantly relieved. The best results were found in those patients who were treated with topical antihistamine, wherein there was improvement of both antiallergic symptoms of nasal itching and sneezing as well as relief of nasal obstruction and also there were no systemic side effects.

TABLE 1

Comparison of pharmacotherapeutic agents in relief of allergic symptoms

	Anti-H1 (sneezing, itching)	Anti-Ach (rhinorrhoea)	Sedation	Nasal obstruction	Eye Symptoms
First generation					
Chlorpheniramine (Avil)	++	++	+	-	+
Triprolidine (Actifed)	++	++	+	-	+
Cyproheptadine (Periactin)	++	++	++	-	+
Promethazine (Phenergan)	+++	+++	+++	-	+
Second generation					
Terfenadine	+++	-	-	-	+
Astemizole	+++	-	-	-	+
Fexofenadine	+++	-	-	-	+
Cetirizine	+++	-	+	-	+
Topical antihistamine					
Azelastine	++	++	-	+	-

References

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UNIVERSAL TONGUE BLADE FOR TONSILLECTOMY

Dear Editor,

Routinely during tonsillectomy a Boyle Davis mouth gag with tongue blade is applied to open the oral cavity and to keep the tongue away from the operative field. While the mouth gag is of a standard universal size the tongue blade has to be changed for an adult or child depending upon the size of the oral cavity. Since all tongue blades fitted on the mouth gag have similar dimensions for the handle and only the tongue plate varies in size depending on adult or paediatric patient a modified tongue blade having separate detachable handle and tongue plates has been designed and successfully tried at our hospital.

The tongue blade consists of two parts :

(a) A universal handle six inches in length, which is hooked at one end to fit onto Draffins bipods and has a socket at the proximal end with a tempered side screw for fitting the tongue plate. The outer surface of the handle is grooved on which the Boyle Davis mouth gag can slide.

(b) Tongue plates of different sizes from paediatric to adult.

Fig. 1 : Universal tongue blade

Fig. 2 : Universal tongue blade

These plates have a small projection at the distal end which fits into the socket at the proximal end of the universal handle and is kept in place by tightening the screw on the handle. The screw is tempered inside the socket to prevent it from getting dislodged and becoming a foreign body (Fig-1&2).

The assembled tongue blade though it offers no technical advantage over the routinely used tongue blades, it makes more economic sense since it has only one universal handle with different tongue plates, thus obviating the requirement of having multiple tongue blades for different age groups.

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UTILITY OF PARANASAL SINUS RADIOGRAPHY

Dear Editor,

Radiographs of paranasal sinuses are frequently taken in patients with obvious nasal pathology to rule out concomitant sinus disease, with equal frequency they are demanded by both general practitioners and otolaryngologists even in patients who do not have apparent nasal pathology like patients with chronic headache, chronic cough, secretory otitis media, chronic pharyngitis, dacryocystitis, nasal turbinate hypertrophy or deviated nasal septum. It is this latter group of patients who are subjected to proof puncture of the antrum if the radiograph is reported positive. A study was thus undertaken to correlate radiographic findings on X-ray PNS with antral washout to see whether paranasal radiography is a useful or an abused unnecessary investigation.

This is a retrospective study of 100 patients in whom there was no infective nasal pathology clinically but whose radiograph showed sinus pathology. The pathology on X-ray PNS was classified as (a) slight haziness of maxillary sinuses, (b) definite haziness of antra (c) opaque maxillary sinus and (d) soft tissue opacity in maxillary sinus. Antral washout was done in almost all the cases and the return was noted. The washouts were as follows (a) clear return denoting no sinus pathology (b) mucoid denoting allergy (c) mucopurulent and (d) purulent in cases with infection. The degree of haziness on sinus radiograph and type of antral washout were compared.

The radiological findings on X-ray PNS were as follows: Slight haziness in 24% cases, definite haziness in 61% cases, opaque antra in 10% of patients and soft tissue opacity in 5% cases (Table-1). One patient had a coincidental finding of osteoma in the (left) frontal sinus. In the slight haziness group although majority of the sinus washouts were clear, 6 patients had a positive antral washout, indicating sinus infection despite radiograph being relatively clear. In this group 18 cases (75%) had clear return on antral washout, 3 cases had mucoid return and another 3 patients had mucopurulent return (Table-2).

TABLE 1
Findings on X-ray PNS

Osteoma	Slight Haziness	Definite Haziness	Opaque	Soft tissue opacity
01	24	61	10	05

TABLE 2

X-ray correlated with proof puncture (P/P)

X-ray / Proof Puncture	Slight Haziness	Definite Haziness	Opaque	Soft tissue
Clear	18	25	02	03
Mucoid	03	12	04	02
Mucopurulent	03	03	01	-
Purulent	-	10	03	-

50 of the 61 cases with definite haziness underwent antral washout. 25 cases (50%) had clear return, 12 cases (24%) had mucoid return, 3 patients (6%) had mucopurulent and 10 cases (20%) had purulent return. Of the 10 cases with opaque maxillary sinus clear return was obtained in only 2 cases (20%) mucoid in 4 patients (40%), mucopurulent in 1 case (10%) and purulent in 3 cases (30%). In patients having soft tissue shadows in the antra suggestive of antral polyp, the return was clear in 3 cases and mucoid in 2 patients.

Paranasal sinus radiography is based on the presence of air in the sinuses. Any change in air content or alteration in translucency caused by any pathology or physiological process, is reflected in the radiograph. Sinus X-rays may appear normal or show evidence of infection in the form of mucosal thickening, fluid levels or total opacity. An opaque sinus may even be due to thickening of the bony walls, small asymmetric antra, or improper centring and rotation of the head leading to difficulty in interpreting radiological appearance.

Many studies have been undertaken to study the utility of sinus radiographs and examine the correlation between radiographic and operative findings. In our series there were 25% false negative cases where X-ray PNS showed only slight haziness of the antrum yet proof puncture was positive. Pfeleiderer et al [1] have reported a rate of 9% to 35% while others have reported results varying from 16% [2] to 60% [3] in this group. Pfeleiderer et al have also reported a very high incidence of false positive results (X-ray showing haziness operative findings clear) - 47% for opaque sinuses and 88% for hazy sinuses. In our study false positive results varied depending on the radiological appearance of the sinuses, it was 75% in cases with slight haziness of sinuses, 50% in hazy sinuses and only 20% in opaque sinuses.

Many reasons have been reported for false positive results. Besides thick walled sinuses, the shadow of the lips [4] narrow