INDIAN J DERMATOL VENEREOL LEPROL 1988; 54 : 27-29



# EVALUATION OF ASTEMIZOLE – A NEW H-1 BLOCKING ANTIHISTAMINE IN URTICARIA

J S Pasricha, Anil Dashore and R K Arya

An open trial of astemizole –a new antihistamine, on 30 patients having urticaria revealed complete relief in 28 patients. The controlling daily dose was 10 mg in 17 patients, 20 mg in 7 and 30 mg in 4. Two patients did not improve even with 40 mg a day given for 7 days. The side effects included mild sedation in 7, dryness of mouth in 3 and constipation in 2 on a dose of 20 or 30 mg a day. Laboratory parameters remained almost normal.

**Key words : Astemizole, Antihistamine, Urticaria, Treatment.**

Astemizole and terfenadine are two new antihistamines[1] which exclusively bind H-1 receptors, but are claimed to be different from the other H-1 blocker antihistamines in the following respects : (1) These drugs are slow to bind the H-1 receptors, and therefore take 4-5[2,3] days to be effective, but once bound to the receptors the dissociation is slow, and therefore the action is prolonged.[1,4] (2) These drugs do not cross the blood-brain barrier, and thus unlike most other antihistamines do not cause drowsiness.[1,2,4,5] A clinical study was therefore, undertaken to evaluate the efficacy and safety of astemizole in patients having urticaria.

## Materials and Methods

In every patient, a detailed history, clinical examination and relevant investigations as described by Pasricha[6] were undertaken to determine the possible cause of urticaria. All patients were treated with an initial dose of 10 mg astemizole per day as a single oral tablet just before dinner. If no improvement occurred within three days, this dose was increased to 20 mg. If still there was no improvement within the next two days, the dose was further increased to 30 mg per day.As soon as the symptoms began to wane, the patients were switched back to a maintenance dose of 10 mg per day for a total of 4 weeks. During this period, the patients did not receive any other topical or systemic treatment.

Laboratory tests such as haemoglobin, TLC, DLC, ESR, SGPT, SGOT, serum alkaline phosphatase, creatinine, blood urea, sugar and urinalysis were performed before starting the treatment, and again 2 and 4 weeks after the start of therapy.

## Results

A total of 30 patients (16 males and 14 females) were included in the study. Their ages varied between 9 and 40 years. The duration of urticaria was 2 months to 10 years. The cause of urticaria was food in 4 cases, dermographism and cold in 3 cases each, cholinergic in 2, and drugs in 1. In the remaining 17 cases, the causative agent could not be elicited.

Following treatment with astemizole, the urticaria disappeared within 24 hours in 1 patient having drug-induced urticaria, within 3 days in 16 patients (4 having urticaria due to food and 12 of unknown aetiology), within 1 week in 3 patients having idiopathic urticaria, within 2 weeks in 6 patients (2 each having dermographism, cholinergic and cold urticaria), within 3 weeks in 1 patient having dermographism, and within 4 weeks in 1 patient with cold urticaria.

Two patients having idiopathic urticaria did not respond to even a daily dose of 40 mg given for one week.

From the Departments of Dermato-Venereology and Pathology, All India Institute of Medical Sciences, New Delhi-110 029, India.

**Address correspondence to** : Dr. J. S. Pasricha.

The controlling dose was 10 mg in 17 patients (12 patients having idiopathic urticaria, 4 having food-induced urticaria and 1 drug-induced urticaria), 20 mg in 7 patients (3 having idiopathic, 3 cold urticaria and 1 cholinergic urticaria), and 30 mg in 4 patients (3 patients having dermographism and 1 cholinergic urticaria). This dose could be reduced to 10 mg after the first week in 9 patients, but in 2 patients with dermographism, 20 mg and 30 mg respectively were required to maintain the remission. After the treatment was withdrawn, recurrences were noticed in 3 patients having dermographism 1-2 weeks after the withdrawal.

Twenty one of these patients had earlier received other antihistaminics with poor results in 9 and mild improvement in 12 cases. Seventeen (80%) of them considered astemizole better than the previously taken drugs.

The side effects observed were, mild sedation in 7, which however, was transitory in 6. The dose of astemizole in these cases was 30 mg a day in 4 and 20 mg in 3. Dryness of mouth was observed in 3 and constipation in 2. These patients were taking 30 mg astemizole a day. All these side effects disappeared after the dose was reduced to 10 mg per day.

No significant abnormality was found in the laboratory parameters, except that in one patient, serum alkaline phosphatase increased from 9 KA units before treatment to 24 KA units after 2 weeks, and 25 KA units after 4 weeks of treatment.

## Comments

Astemizole is easily absorbed from the gastro-intestinal tract.[1] It effectively binds the H-1 receptors and blocks all the H-1 mediated actions of histamine but has no effect on the H-2 mediated actions.[1] It also has no anticholinergic or antiserotonin activity.[1] Elimination of the drugs is slow, 80% of the drug being excreted in 14 days.[1] Thus, a single oral dose of 10 mg was observed to significantly inhibit the histamine-induced skin reactions for 20 days,[7] and it has been found to be clinically effective in hay fever in a once a week regime.[2]

Our experience corroborates the findings reported earlier that astemizole takes 3 or 4 days to control urticaria. A previous multicentric study on urticaria[3] revealed effective control in 26 (74%) of the 35 patients, compared to 28 (93.3%) out of 30 cases studied by us. The controlling dose however, would depend upon the severity of urticaria. Thus, starting with 10 mg a day, the dose can be increased till the symptoms disappear completely. Still, there are some urticaria patients who do not respond to any antihistamine; there were 2 out of 30 patients in our study, and 4 out of 35 in another.[3] The side effects with astemizole were also infrequent, these occurred only when the dose was high (20-30 mg) and disappeared on reducing the dose. The laboratory parameters also remained almost unchanged.

Lack of recurrence of urticaria following withdrawal of the drug, in 25 of the 28 patients is interesting. Although astemizole is known to have a prolonged duration of action, urticaria is expected to recur on withdrawal of the drug unless the actiologic stimulus is withdrawn.

## References

1. Flowers FP, Araujo OE and Nieves CH : Antihistamines, Internat J Dermatol, 1986; 25 : 224-231.
2. Callier J, Engelen RF, Ianniello I et al : Astemizole (R 43512) in the treatment of hay fever, Curr Therap Res, 1981; 29 : 24-25.
3. Damscaux M, Lachapelle JM, De Weert J et al : Astemizole in the treatment of chronic urticaria, Janssen Pharmaceutica Clinical Research Report R 43512/012, 1981.
4. Niemegeers CJE and Awouters F : R 43512—A new, very potent, long acting and specific $H_1$ histamine antagonist, devoid of central activity, Janssen Pharmaceutica, Preclin Res Rep, R43512/5.

5. Owen JA : Astemizole; an efficient antihistamine with an apparent lack of toxicity, Hosp Formulary, 1983; 18 : 495-496.

6. Pasricha JS : Allergic Diseases of Skin, Oxford and IBH Publishers, New Delhi, 1981; p 22.

7. Vanden Bussche G, Standaert A, Scheijgrond H et al : A randomized double-blind study of the potency and duration of action of astemizole as an inhibitor of wheal and flare reaction of intradermal histamine injections, Janssen Pharmaceutica, Clin Res Rep, R 43512/3.