

The Journal generally does not publish uncontrolled clinical studies, especially when the responses evaluated are mainly subjective. However, I think our readers would be interested in seeing these provocative preliminary therapeutic findings in a distressing disorder while the double-blind study of hydroxyzine effects gets underway.

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Editor

Hydroxyzine for interstitial cystitis

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Interstitial cystitis (IC) is characterized by voiding frequency, urgency, and nocturia, as well as a bearing-down sensation, dyspareunia, and suprapubic pain.¹ On dilation, the bladder appears friable with numerous glomerulations, and bladder biopsy reveals inflammation with increased number of activated mast cells.²

Abbreviations used

IBD: Irritable bowel disease
IC: Interstitial cystitis
q.h.s.: Each bedtime

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There are almost one half million IC cases in the United States, 90% females, many of who also report allergies, migraines, irritable bowel disease (IBD), and fibromyalgia, which appear to worsen perimenstrually.³ Treatments have included the histamine-1 receptor antagonist tripeleennamine HCl (Pyribenzamine), dimethyl sulfoxide (DMSO), a polysulfonate (Elmiron), and tricyclic antidepressants, with fewer

TABLE I. Patient information and clinical response

Patient No.	Age	Duration of IC symptoms	Other symptoms	Amount of drug† (mg/day)	Duration of treatment (mo)	Menstrually related worsening
1	46	10 yr	Allergies, IBD, headaches	50	13	Hysterectomy
2	50	3 yr	Allergies	75	13	Hysterectomy
3	41	6 yr	Allergies	25	6	+
4	39	8 mo	Allergies, IBD	50	7	+
5	32	7 yr	IBD	100	8	—
6	31	18 mo	Allergies	75	9	+
7	57	4 yr	Allergies	50	11	+
8	40	11 yr	Allergies	25	6	+
9	55	21 yr	Allergies	50	11	—
10	56	3 yr	Allergies, esophagitis, fibromyalgia, IBD, migraines	100	6	+
11	31	12 yr	Allergies, eczema, IBD	50	6	+
12	53	18 mo	Allergies	25	7	+
13	55	6 yr	Allergies, IBD	50	6	+

*5+ being the starting point before treatment.

†At time of best response.

‡N/A, Never a presenting symptom.

§Patients had complete remission and decreased the drug to 25 mg every day.

||To time of submission.

than 30% of the patients responding for a short time only and with numerous adverse effects.¹⁻³

Patients with IC who fit the National Institutes of Health-established diagnostic criteria¹ were chosen randomly after the Fifth NIH/Interstitial Cystitis Association (ICA) Congress (New Orleans, May 1990). Hydroxyzine HCl (Atarax) or pamoate (Vistaril) was prescribed by each patient's physician as 25 mg at bedtime (q.h.s.) for 1 week, progressing to 50 mg q.h.s. for 1 month, after which some added 25 mg in the afternoon as tolerated. Patients were told that hydroxyzine, as most other drugs, should not be taken during pregnancy and that it may worsen an untreated depression. Most patients initially reported sedation and generalized weakness, which decreased in a few days.

Thirteen female patients are identified by their age, duration of IC symptoms, presence of other symptoms, duration of treatment, and rating of the clinical response with use of a five-point scale. Most patients on 50 mg per day for 3 months or more reported approximately 75% decrease in frequency of voiding and nocturia, increased sleep, and significant reduction in burning and pain (Table I). Two patients went into remission after a year, but when they discontinued the drug, symptoms returned and they had to resume taking 25 mg q.h.s. One patient reported increased appetite, one reported bloating, and two had urinary retention when the dose exceeded 50 mg per day.

Clinical response*			
Frequency	Nocturia	Burning	Pain
—	—	±	±
+	+	+	+
+	+	+	++
+	+	++	++
+	+	—	—
—	—	—	—
—	—	—	—
N/A‡	N/A	+++	++
+	+	—	+
N/A	N/A	+	+
+++	++	N/A	++
+	+	—	+
++	+	+	+

These are preliminary, subjective results on a small number of patients and on varied drug regimens. Nevertheless, the results are impressive in their consistency, extent, and duration of the clinical response in a devastating disease without any effective treatment to date. A double-blind, placebo-controlled study is now being planned.

Hydroxyzine is a piperazine histamine-1 receptor antagonist with a three-ring structure.⁴ It reaches a peak serum concentration in approximately 2 hours after oral administration and is almost entirely metabolized and cleared through the kidneys and liver with a half-life that may vary from 3 to 20 hours in adults.⁴ Hydroxyzine is used mostly for pruritus and urticaria, but is also often given together with opioids for enhanced analgesia in postoperative pain. Hydroxyzine inhibits mast cell secretion in rats and in human beings,^{5,6} thus preventing the release of mediators that include powerful vasoactive, inflammatory, and nociceptive molecules.² Mast cell activation in IC may be triggered by neuropeptides, by the neurotransmitter acetylcholine, and by direct nerve stimulation,² processes that are also inhibited by hydroxyzine (unpublished observations). Finally, hydroxyzine has anticholinergic properties that would help reduce frequency of urination, and it has also sedative and anxiolytic properties.

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