

AUA 2006 - Infections/Inflammation of the GU Tract: Interstitial Cystitis

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The poster session on interstitial cystitis (IC) included a number of clinical and basic science presentations. Ken Peters and Philip Hanno moderated the session, which included some lively discussions. Some of the highlights follow.

Stephanie Tseng-Rogenski and Monica Liebert expanded on their data regarding interleukin 8 (IL8), a cytokine known to participate in tissue defenses against infections through its chemotactic effect on white cells. (abs 277) They had previously demonstrated that IL8 mRNA is down-regulated in bladder biopsies from patients with interstitial cystitis compared to normal controls. They presented cell culture data to suggest that IL8 also plays a role in the cellular maintenance of normal urothelial cells beyond its role in immune defense. The loss of IL8 expression in interstitial cystitis may contribute to poor urothelial survival in this disorder.

Arndt Van Ophoven and his group from Muenster, Germany presented an interesting study of hyperbaric oxygen therapy for treatment of IC. (abs 278) They reported results of a randomized, double-blind, sham controlled study of 21 patients with IC. Patients were randomized to 1.3 atmospheres or 2.4 atmospheres for 90 minutes and a total of 30 sessions. There were 2 dropouts in the active treatment group. None of the control patients had benefit as per their global response assessments, but 8 of 12 active patients achieved benefit. At one year of follow-up, 5 of the 12 patients still perceived benefit from the intervention. Pain and urgency seemed to improve more than absolute frequency.

Two interesting posters from the University of Pittsburgh examined the intravesical instillation of liposomes (281) and liposome plus cannabinoid agonist IP-751 (282) in an in-vivo rat bladder preparation. In the first study, presented by Vincent Hsieh, protamine sulfate-induced bladder hyperactivity was found to improve with intravesical liposome administration to an extent where intercontraction interval was doubled compared to pentosan polysulfate. DMSO showed no beneficial effect. Ratna Ganabathi showed that IP-751, a potent analog of tetrahydrocannabinol (THC)-11-oic acid when formulated with liposomes, can suppress bladder nociceptive responses induced by acetic acid treatment of the bladder. Ajulemic acid (cannabinoid receptor agonist IP-751) was formulated into liposomes because of aqueous insolubility.

Three epidemiologic studies attracted attention. J. Quentin Clemens and colleagues estimated the direct costs and medication use associated with interstitial cystitis in women carrying the diagnosis in a large managed care population in the Northwest. (abs 284) He reported a 2-3 fold higher figure in direct medical costs as compared with similar individuals without the IC diagnosis. Costs, as expected, were due to outpatient and pharmacy costs. Costs associated with missed work, lost productivity, and poor quality of life was not included in estimates. Donna Carrico from Royal Oak, Michigan broached the taboo subject of abuse in women with interstitial cystitis and pelvic floor dysfunction. (abs 290) She found an incidence of physical, emotional, or sexual abuse in 22.4% of controls, 36.9% of patients with IC, and 55% of patients with IC who have demonstrable levator pain and pelvic floor dysfunction. Ken Peters and colleagues from Royal Oak and Milan, Italy discovered that women with IC have significantly more of all types of pelvic surgical procedures than women without IC. (abs 296) In terms of hysterectomy, the frequency was twice that in patients with IC, two-thirds of which were done prior to the diagnosis of IC, raising the specter of unnecessary surgery in some patients.

Robert Mayer and Ronald Wood from Rochester, NY studied the hypothesis that an abnormality of urothelial permeability permits substances in urine to cause local irritation, thus causing interstitial cystitis. (abs 294) Quantitative fluorescein uptake from the bladder was the diagnostic parameter used to study this hypothesis. Unexpectedly, IC patients appeared to have less maximal uptake and less variability of uptake than control patients. The findings did not support the enhanced permeability theory as the etiology of IC.

Jurjen Bade from the Netherlands reviewed the long-term efficacy of sacral neuromodulation in patients with refractory interstitial cystitis. (abs 295) He found improvement reported at the 3 month post-procedure mark in 85% of properly selected patients. At one year the success rate dropped to 45%, indicating caution in widespread use of the procedure is warranted until more long-term data becomes available.