

THERE IS A LOW INCIDENCE OF RECURRENT BACTERIURIA IN INTERSTITIAL CYSTITIS PATIENTS FOLLOWED LONGITUDINALLY

Aims of Study

To establish whether patients with confirmed IC presenting with symptoms of UTI have actual urinary bacterial contamination versus a "flare" of their IC symptoms.

Methods

One hundred and six consecutive female patients (ages 39.8 ± 14 years) with newly diagnosed IC were identified and followed longitudinally for a period of 22 months. Strict diagnostic criteria for IC were followed. Cystoscopy was not used to diagnose IC since it is usually only positive in more advanced cases. On each patient, an initial urinary specimen was obtained by sterile catheterization and cultured for bacteria. Eight patients with an initially positive urine culture were treated based on antibiotic sensitivities. Eight patients had an initially positive urine culture. Repeat cultures 8 weeks after treatment were all negative. Once sterile urine was established, the diagnosis of IC was confirmed using a potassium sensitivity test (PST). The previously validated pelvic pain/urgency/frequency questionnaire (PUF questionnaire) was obtained on 89 patients. The average score was 19 (range 5-33, total possible score = 35). After the diagnosis of IC was made, all of the patients were treated with pentosan polysulfate in addition to some of the patients receiving other established medications used to treat IC (Hydroxyzine, Amitriptyline). All patients were sterile or were receiving some form of birth control. Patients were instructed to present to the office whenever they developed symptoms of UTI at which time a sterile catheter specimen was obtained and sent for culture. A culture was considered positive if there were greater than 1,000 colonies. Patients who did not report a flare-up were contacted to establish whether unreported treatments were given.

Results

Seventy-two patients (68%) had no UTI episodes or flares during the study period. None of them reported seeking care for UTI symptoms or IC symptoms elsewhere. The remaining 34 patients (32%) presented with 54 flares of which 44 were culture negative (80.5%) and 10 were culture positive (18.5%). Most of these patients had a single flare ($n=21$) with 3 positive cultures (14%). Recurrent UTI symptoms (≥ 2 flares) were seen in a small group ($n=14$) for a total of 33 flares. Seven had 2 flares (12 negative, 2 positive), 5 had 3 flares (12 negative, 3 positive), and 1 patient had 4 flares (2 negative, 2 positive) with a culture positive rate of 21% within the recurrent flare group or 12.9% when all flares were considered. None of the patients with an initially positive culture suffered a subsequent flare-up. Nine of the 10 positive bacterial cultures were due to gram negative bacteria: *E. coli* ($n=6$), *P. mirabilis* ($n=1$), *K. pneumonia* ($n=1$), *Citrobacter* sp. ($n=1$). One culture revealed *Streptococcal* sp. There was no difference between the groups who suffered flares and those who did not in regards to age (39.6 ± 14.3 vs 41.2 ± 14.4 , $p = .45$). The difference between PUF questionnaire results approached statistical significance when patients with flares were compared to those without flares (20.2 ± 5.2 vs 18.2 ± 5.4 , $p = .056$). There was no difference in age or PUF scores found between those suffering a single flare versus recurrent flares.

Conclusions

Interstitial cystitis is a complex disease manifested by pain and voiding dysfunction. This study is the first to report on the low incidence of confirmed urinary infections in a large group of IC patients followed longitudinally. The incidence of UTI symptoms in treated IC patients appears to be similar to that found in the general population. These findings suggest that only a small number of patients with IC who complain of UTI symptoms will have a positive urine culture (18.5%). The low incidence of positive cultures may indicate that treatment should be limited to patients who have positive indicators for UTI such as a positive urine dipstick confirmed with a bacterial culture. Since the flares of IC are usually self-limiting, treatment response to antibiotics may be misleading in light of the low incidence of positive urine cultures. These data suggest that the symptom flares of IC are not usually associated with recurrent UTI and therefore, are likely due to a triggering of the other painful mechanisms involved in IC.