

## A SIMPLE TEST TO AID IN THE DIAGNOSIS OF INTERSTITIAL CYSTITIS

### Hypothesis / aims of study

The diagnosis of interstitial cystitis can be elusive to many physicians. The purpose of our study was to assess the sensitivity and specificity of a simple exam finding –tenderness on bladder palpation-- compared to the presence of glomerulations on cystoscopy in the diagnosis of interstitial cystitis (IC).

### Study design, materials and methods

The charts of all patients seen during the months of June and July 2005 were reviewed for the presence of urethral and bladder tenderness with single digit palpation on vaginal exam. Charts were included if the workup of urinary symptoms was complete with a diagnosis based on symptoms and diagnostic tests. Tests included simple cystometry, multichannel urodynamics, office cystoscopy and/or cystoscopy under anesthesia. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were calculated. The presence of glomerulations or Hunner's ulcers on office cystoscopy or cystoscopy under anesthesia in combination with symptoms of urgency, frequency and pain were considered diagnostic of IC.

### Results

Five hundred and ninety-three of 604 charts identified had complete data. One hundred and six subjects had tenderness on bladder palpation. Forty-seven of the 106 with bladder tenderness had a diagnosis of interstitial cystitis. Five of the 487 without tenderness had a diagnosis of interstitial cystitis. The sensitivity of tenderness on bladder palpation was 90.4%, specificity was 89.1%, PPV was 44% and the NPV was 99%. The prevalence of IC in our population is 9%. The prevalence of tenderness on bladder palpation was 18%. The mean (SD) age of patients with IC vs. those without was 49 years (13) vs. 61 (15),  $p < 0.001$ . Mean BMI 27 (6) vs. 27 (6), median parity 2 (0-5) vs. 2 (0-10), frequency 1hour (0.1-6) vs. 2 (0-7), urgency 84% vs. 70%, dysuria 53% vs. 16%, nocturia 2.5 (0-10) vs. 1.5 (0-10), dyspareunia 38% vs. 11%, pelvic pressure 64% vs. 40%, glomerulations on office cystoscopy 56% vs. 3%.

### Interpretation of results

Interstitial cystitis poses a diagnostic dilemma for many physicians and patients. Hydrodistention with glomerulations or Hunner's ulcers has been the gold standard for the diagnosis of IC. Some experts argue that this criteria is too strict; while others argue that the presence of glomerulations are not specific for the diagnosis of IC.(1,2) The potassium chloride (KCL) sensitivity test is another method of diagnosis, but can be painful to patients who have the disease and is only 75-80% sensitive. We found that the simple maneuver of palpating under the bladder on vaginal exam to elicit tenderness is very sensitive and specific in the diagnosis of IC. The sensitivity and specificity of this exam finding may increase when compared to less strict diagnostic criteria than the presence of glomerulations on cystoscopy.

### Concluding message

The finding of tenderness on bladder palpation may prove useful as an initial screen for patients with symptoms of interstitial cystitis as well as discriminating who should have further diagnostic evaluation or not. This simple exam finding may also provide a useful tool for generalists to determine which patients to refer for further evaluation.

(1) Cystoscopic findings consistent with interstitial cystitis in normal women undergoing tubal ligation. J Urol 1998;160(5):1663-7.

(2) The diagnosis of interstitial cystitis revisited: lessons learned from the National Institutes of Health Interstitial Cystitis Data Base (ICDB) Study. J Urol 1999;166:553-7.

**FUNDING: NONE**

**DISCLOSURES: NONE**

**HUMAN SUBJECTS: This study was approved by the Evanston Northwestern Institutional Review Board and followed the Declaration of Helsinki Informed consent was not obtained from the patients.**

