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**Authors:** K.J. Kreder, S.K. Lutgendorf, T.L. Ratliff, M.B. Zimmerman, N.E. Rothrock, A.N. Hoffman  
**Institution:** University of Iowa  
**Title:** METHYLHISTAMINE AND INTERLEUKIN-6 AS MARKERS IN INTERSTITIAL CYSTITIS

**Aims of Study:**

Interstitial cystitis is a chronic condition which causes urinary frequency, urgency and pain. Since the diagnosis of this condition is somewhat subjective, we explored several inflammation markers for their ability to distinguish between IC patients and healthy women with no urinary symptoms.

**Methods:**

Forty women with IC (mean age 50.48, S.D. 16.45) and 29 healthy controls (mean age 53.14, S.D. 15.49) collected a 24-hour urine sample. Urine samples were examined for histamine, methylhistamine, and interleukin-6 (IL-6). Patients were instructed to avoid foods containing bioactive amines and to avoid allergy medications containing ephedrine or pseudoephedrine, beverages containing caffeine and diet pills containing phenylpropanolamine or amphetamine during the time of urine collection as these substances have been reported to affect measurements of histamine. Patients who had intravesical treatments had a one-month treatment-free interval between their last treatment and sample collection. Urine samples were kept refrigerated at all times during the collection and were centrifuged and frozen immediately after delivery to the clinic.

**Results:**

If IL-6 is  $>2.3$  or methylhistamine is  $>154\mu\text{g/L}$ , the odds were 11.5 times greater that the patient had IC vs. values below these cutoff points. The sensitivity of these cutoff points is 75% (95% CI: 59%, 87%), specificity is 79% (CI 95%: 60%, 92%), false negative rate is 30% (95% CI: 16%, 49%), and false positive rate is 17% (95% CI: 6%, 33%). There was no relationship between histamine and IC patients vs. controls.

**Conclusion:**

Examination of IL-6 and methylhistamine levels provide useful markers for identification of IC patients.

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