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RISK OF IRRITABLE BOWEL SYNDROME AND DEPRESSION IN WOMEN WITH INTERSTITIAL CYSTITIS

Hypothesis / aims of study

We performed a case-control study to assess the prevalence of interstitial cystitis, depression, and irritable bowel syndrome in our study populations. We used this data to determine the risk of irritable bowel syndrome and depression in women with interstitial cystitis.

Study design, materials and methods

Data was collected on symptoms of irritable bowel syndrome and depression on 46 women newly diagnosed with interstitial cystitis, and 46 unmatched controls using standardized, validated questionnaires (O'Leary- Sant Interstitial Cystitis Symptom Index, Patient Health Questionnaire PHQ-9 Depression Module, the Rome II Irritable Bowel Syndrome questionnaire). Interstitial cystitis was diagnosed based on symptoms and findings of cystoscopy with hydrodistention. The control group consisted of women without irritative voiding symptoms and presenting for annual gynecologic examination.

Results

The two groups were similar with respect to age, race, parity, previous pelvic surgery, and postmenopausal hormone use. Patients with interstitial cystitis were more likely to be diagnosed with irritable bowel syndrome (OR = 11, 95% CI 2.7, 52; chi-square test, $p < .001$) and depression (OR = 3.97, 95% CI 1.17, 14.1; chi-square test, $p < .05$) compared with controls. When compared with controls, the risk of depression was significantly higher in women with severe interstitial cystitis symptoms (OR = 5.92, 95% CI 1.63, 9.73; chi-square test, $p < .001$) versus women with mild interstitial cystitis (OR = 1.26, 95% CI 0.15, 8.87; Fisher's exact test, $p = 1.0$). The risk of irritable bowel syndrome in women with severe interstitial cystitis symptoms (OR = 11.8, 95% CI 2.67, 22.1; chi-square test, $p < .001$) was similar to women with mild interstitial cystitis symptoms (OR = 10.8, 95% CI 1.8, 22.9; chi-square test, $p < .001$). Subjects in the case group with both severe interstitial cystitis and irritable bowel syndrome, had a significantly increased risk of depression versus subjects with mild interstitial cystitis and no irritable bowel symptoms (OR = 7.11, 95% CI 1.61, 87.8; Fisher's exact test, $p = 0.05$), and versus controls (OR = 7.29, 95% CI 1.63, 34.5; chi-square test, $p = 0.002$). There was no significant difference noted when comparing the risk of depression in the group with the most severe symptoms versus women with mild interstitial cystitis and irritable bowel symptoms (OR = 4.4, 95% CI 0.34, 124.4; Fisher's exact test, $p = 0.34$). Subjects with mild interstitial cystitis and no irritable bowel symptoms had a risk of depression comparable to controls (OR = 1.02, 95% CI 0.0, 11.8; Fisher's exact test, $p = 1.0$)

Interpretation of results

The results of this study suggest that women with interstitial cystitis are more likely to have irritable bowel syndrome and more likely to have depression than women without interstitial cystitis. A common pathogenesis has been proposed for interstitial cystitis and irritable bowel syndrome, namely mast cell-nerve interaction and the subsequent development of neurogenic inflammation. Given this theory of a common pathogenesis, it is not surprising that subjects with mild interstitial cystitis symptoms were equally as likely to meet the criteria for irritable bowel syndrome as subjects with severe interstitial cystitis symptoms. Conversely, depression and interstitial cystitis most likely have very different etiologies. The increase in risk of depression with increasing urinary symptoms reflects a response to chronic pain, and sleep deprivation caused by repeated episodes of nocturia. Treating the urinary symptoms, therefore, would result in less pain and better sleep patterns reflective of improved depression scores.

Concluding message

The risk of irritable bowel syndrome and depression appears to be greater in women with interstitial cystitis compared with controls. When compared with controls, the association of

depression is stronger in women with severe symptoms of interstitial cystitis than in women with mild symptoms.