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THE FIBROMYALGIA BLADDER INDEX

Aims of study

As sensory bladder symptoms are common in fibromyalgia (FM), the objective was to develop a valid, reliable and clinically relevant instrument to assess sensory urinary symptoms in women with this condition. The rationale for the development of this instrument was based on research that suggested the possible involvement of the central nervous system in the pathogenesis of fibromyalgia, being operative in interstitial cystitis (IC) (1). As the genito-urinary symptoms of FM and IC are similar, this study tested the validity of the Interstitial Cystitis Symptom and Problem Index (ICSI/ICPI) within the fibromyalgia female population.

Study design, materials and methods

Phase I of this study consisted of focus groups of women (n=10) who had been diagnosed with FM and who experienced sensory bladder symptoms. The purpose of these group discussions was to ensure that key indicators and the ways in which the women experienced bladder irritability was compatible with and inclusive in the ICSI/ICPI instrument. In Phase II of the study, women (n=90) diagnosed with FM completed the ICSI/ICPI, the Fibromyalgia Impact Questionnaire (FIQ), the SF-36 Health Survey (SF-36), the Kings Health Questionnaire (KHQ) and a vulval symptom assessment scale that was specifically developed for this study. Prior to data collection, a urological assessment by a urologist/ urogynaecologist to exclude other bladder pathology ensured the suitability of the women for inclusion into the study. This screening included a subjective assessment, a three-day bladder diary interpretation, urinalysis and free flowmetry combined with measurement of residual urine by ultrasound bladder scanning.

Results

Internal consistency reliability of the four symptom items of the ICSI (0.60), the four impact items of the ICPI (0.71) and the combined ICSI/ICPI index (0.81) within the FM population was assessed using Cronbach's alpha coefficient (2). To further validate the ICSI/ICPI instrument within the FM population, a factor analysis was undertaken to assess the internal structure of the scale. The resultant pattern of loading of urinary symptoms and impact within the FM population revealed two separate components of symptom and problem combinations as distinct from the original ICSI/ICPI developed for the IC population. These components form the two subscales of the newly developed Fibromyalgia Bladder Index (FBI). Both subscales, the Bladder Urgency and Pain Subscale (BUPS) and the Frequency and Nocturia Subscale (FNS) achieved an internal consistency estimate of 0.76 while the total FBI achieved an internal consistency estimate of 0.81. The FBI and the individual subscales (BUPS & FNS) have demonstrated acceptable test-retest reliability (0.85, 0.84, and 0.79 respectively). A positive correlation between the FBI and the KHQ (0.735) and between the FBI and the FIQ (0.433) provided evidence of concurrent validity.

Interpretation of results

The Fibromyalgia Bladder Index measures the two most relevant groupings of variables that impact on women with FM who experience bladder irritability. This condition-specific instrument is more specific and precise than the ICSI/ICPI for the FM population and reflects the experience and reality of urinary symptoms and symptom impact for women with FM.

Concluding message

This brief self-administered index will be useful in the evaluation and management of patients with fibromyalgia who present with irritable bladder symptomatology. As a reliable and valid outcome measure, this condition-specific instrument, the Fibromyalgia Bladder Index will be useful in presenting clear indications of bladder symptoms and impact during treatment regimes and intervention therapies for this condition.

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2. Psychometric Theory. 3rd ed. New York: McGraw Hill; 1994.