

## EPIDEMIOLOGICAL AND PHYSIOPATHOLOGICAL ASPECTS ABOUT INTERSTITIAL CYSTITIS IN THE POPULATION OF NORTH-EASTERN ITALY

### Hypothesis / aims of study

The present study considered a group of subjects living in the areas of Udine and Pordenone, who came to our observation between January 2003 and September 2004 presenting painful pelvic symptomatology defined according to ICS standardisation (2002). Aim of the study was to evaluate under a clinical and physiopathological aspects a group of patients never diagnosed before and never treated specifically for chronic pelvic pain, according what defined by Public Health Authority of Friuli Venezia Giulia (North-eastern Italy).

### Study design, materials and methods

Patients came to the Laboratory of Urodynamics and Neuro-Urology of the City Hospital and, after informed consent, they were submitted to examinations (table 1) which lead to the diagnosis of interstitial cystitis (IC) under the histological profile and according to NIDDK criteria.

### Results

The subjects affected by IC (n. = 23) were in total 2 ‰ over a population of 805.038 inhabitants (ISTAT 2001), as reported by other Authors (1) who described an incidence of 0.66/100.000/yr for males and 1.2/100.000/yr for females. In the referred period (21 mos), the expected incidence was 24.5 cases (14 case/yr) which agrees with the number of the considered group, subdivided in 17 women and 6 men (3:1 rate), mean age 51 yrs (20-78 yrs). The mean age of the male subgroup was 48 yrs while in the female subgroup was 53 yrs. Symptoms had been lasting 7 yrs to diagnosis (1-33 yrs).

### Interpretation of results

All previous examinations were negative for infective, neoplastic, malformative or structural pathologies in the urinary tract as well as the intestinal and genital system in the pelvic area. The onset of the disease began in 69% with lower urinary tract symptoms (LUTS), bladder pain in 56% or vestibulitis in 26% of cases. The micturition history showed a mean daytime frequency of 9 voids (5-18) and mean nocturia was of 2 times in a night (0-5). The Parsons' test was positive in 14 patients out of 23 (60.8%) and trigger or tender points, at the physical examination, reproduced the usual pain on the genital area (26%) or on bladder/urethra (34%) and on the muscular pelvic floor (87%). Under a functional profile, urodynamics showed normal parameters of bladder compliance (mean 61.29 ml/cmH<sub>2</sub>O), of bladder capacity (mean 365 ml), while the presence of symptomatic detrusor overactivity was found in 13 subjects (56.5%) with mean p det = 30.5 cmH<sub>2</sub>O at a mean infusion volume of 264.5 ml. The bladder pain was reproduced in all patients at a mean volume of 111.15 ml (70-130 ml). Thirteen subjects (56.5%) presented sphincter overactivity (EMG) during the void phase (dysfunctional voiding) and detrusor hypocontractility was present in 18 cases (78.2%) corresponding to a residual volume found in 17 cases (74%) that is 27.7% of the cystometric bladder capacity (mean value = 101.1 ml). The bioelectrical parameters, concerning a pudendal nerve dysfunction (increased and asymmetric pudendal nerve terminal motor latency) were correlated in 85% of cases to detrusor hypocontractility while no correlation can be supposed between peripheral neurogenic dysfunction of pudendal nerve and muscular pelvic hyperactivity. In all patients with a neurogenic lesion found at evoked sacral potential testing (sacral reflex increased in 9 cases out of 23 – 30.4%), the abnormality of the sacral reflex was correlated in every case to the detrusor-sphincter dyssinergia and to bladder pain during cystometry.

### Concluding message

The IC-syndrome shows different clinical pictures and itself represents an etherogeneous complex of pathologies with different levels of severity. In males, the most frequent presentation (83%) is an isolated pelvic pain (5 cases out of 6), while in females the main clinical picture (88%) is LUTS (15 case out of 17). Besides, men come to specialized clinical observation before women, considering the main symptom. The spastic myalgia of levator ani, which is globally found in 87%, seems to be the common finding, significantly contributing to the origin of the chronic pelvic pain even if the muscular pelvic floor shows a voluntary hypocontractility. These data underline the importance of anatomical structures involved and surrounding the lower urinary tract. Besides, it is important to point out the opportunity of a physiokinetic rehabilitation program, with an anthalgic and relaxing purpose, in patients affected by IC, to be combined with other pharmacological therapies

### References

- 1) Interstitial cystitis – Epidemiology, diagnostic criteria, clinical markers. Reviews in Urology, vol. 4 (2), 2002: S3-S8.
- 2) Workshop ICS-meeting, Florence (Italy) 2003: A relationship to myofascial pain and dysfunction

### Table 1 – CLINICAL WORK-UP

- History and bladder diary
- Physical examination
- Pelvic examination
- Symptom score (Sant - O'Leary score / Patient symptom scale)
- Parsons' test
- abdominal and perineal (or trans-rectal in male) ultrasound
- videourodynamics (comprehending uroflowmetry, cistometry, pressure-flow study, kinesiological perineal EMG, urethral pressure profile in female)
- electrophysiological tests of the pelvic floor (PNTML, ESP, anal sphincter EMG)
- cistoscopy (with deep biopsy and washing cytology)
- immunohistochemistry (on detrusor biopsy)