

HISTOLOGY IN BLADDER PAIN SYNDROME PATIENTS, 5 YEARS IN RETROSPECT.

Hypothesis / aims of study

The population of patients with bladder pain syndrome (BPS) or interstitial cystitis is very heterogeneous. This makes diagnosis of this condition quite difficult. Clear biomarkers are also unavailable. The diagnosis is mainly based on symptoms as chronic pelvic pain, pressure or discomfort perceived to be related to the urinary bladder accompanied by at least one other urinary symptom like persistent urge to void or frequency as stated in the ESSIC consensus. In addition to that the consensus mentions further classification of BPS through cystoscopy and histology.

When examining histology in these cases, the pathology department in our clinic mainly focuses on detrusor mastocytosis to support a clinical diagnosis. As found in the literature, mastocytosis is defined as 28 mast cells/mm² or more in the detrusor muscle. A number of 20-28 mast cells/mm² is a grey area.

The aim of the present study was to evaluate the rate of histologic confirmation in our BPS patients in the past 5 years. A second goal was to see if there is a difference in the number of mast cells between cases with and without a Hunner's lesion.

Study design, materials and methods

We looked into all patients that underwent surgical procedures for bladder pain syndrome in the past 5 years in our department. All the patients from whom bladder tissue was examined by the department of pathology were included. Cases with bladder malignancies were excluded.

Results

A total of 54 (11 males, 43 females) patients were included. In 46 of these patients histology was obtained through biopsy with cystoscopy, 8 other patients underwent a cystectomy because of functional conditions. In 39% a Hunner's lesion was reported. 11 specimens contained no detrusor muscle so no staining for mast cells was performed. The exact number of mast cells, reported in 36 cases, was on average 41/mm². In 68% of all the samples stained for mast cells (n=40) the number of mast cells was $\geq 20/\text{mm}^2$ and in 58% $\geq 28/\text{mm}^2$. In the patients with a Hunner's lesion the number of mast cells was higher (44 versus 38) (not significant).

Interpretation of results

When solely looking at histology and a true mastocytosis of 28 mast cells/mm² or higher, the diagnosis was confirmed in 43%. The number of mast cells was not statistically different when a Hunner's lesion was present.

Concluding message

Mast cell count is regarded as the standard for histologic confirmation of BPS because it has standardized values. However the drawback is the need for detrusor in the biopsy as in 20% of our cases no mast cell count was performed because detrusor muscle was absent. This shows the need for additional objective markers to confirm the diagnosis of BPS.

Disclosures

Funding: research made possible with funding by Pohl Boskamp **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** The data was collected from patient files. The patient themselves were not subjected to any tests. **Helsinki:** Yes **Informed Consent:** No