

## CORRELATION BETWEEN COLLAGEN AND URINARY SYMPTOMS IN PATIENTS WITH PROSTATIC OBSTRUCTION

### Hypothesis / aims of study

To explore relationships between the collagen content of detrusor specimens and lower urinary tract symptoms (LUTS) in patients with prostatic obstruction.

### Study design, materials and methods

In our study we enrolled 42 patients (mean age 74, range 66 to 88) with symptomatic urodynamically obstructed BPH undergoing transurethral resection of the prostate, we also enrolled 12 men (mean age 75, range 67 to 82) undergoing transurethral resection of the bladder for primitive Ta bladder cancer, with no significant urinary symptoms, as the control group. During the transurethral surgical procedure in controls and in patients with BPH, a biopsy was performed deep through the muscular layer from either of the lateral bladder walls. Computerised morphometric analysis of the stained sections was performed with an image analysis system, and a percentage of collagen fibers was extracted through morphological filtering and expressed as a mean percentage of the total bioptic area.

### Results

Collagen content in bladder detrusor specimens was significantly higher in patients with BPH compared to controls.

### Interpretation of results

Collagen content in bladder detrusor specimens was significantly higher in patients with BPH compared to controls (44.2%±7.8%, and 19.2%±4.5% of bioptic area, respectively  $P<0.001$ ). Mean detrusor collagen content was clearly higher in patients with IPSS severe symptoms than in patients with IPSS moderate symptoms (48.5%±6.2%, and 41.1%±5.0%, respectively  $P<0.01$ ).

### Concluding message

Our study supports the important role of detrusor collagen in determining LUTS in obstructive BPH. Collagen neoformation could probably have a role in the post operative persistence of LUTS in patients undergoing surgery for BPH.

### References

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### Disclosures

**Funding:** no **Clinical Trial:** Yes **Public Registry:** No **RCT:** Yes **Subjects:** NONE