

Peri-urethral fibrosis related with lower urinary tract symptoms on laparoscopic radical prostatectomy specimen

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❖ Hypothesis / aims of study

Prostatic inflammation
Fibrotic changes in peri-urethral prostatic tissues
Related with pelvic pain and lower urinary tract symptoms (LUTS).

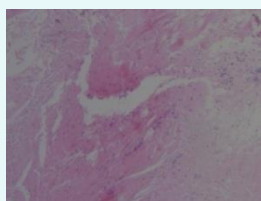
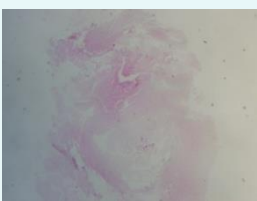
Investigated the morphologic and pathologic findings of periurethral tissue on laparoscopic radical prostatectomy specimen.

❖ Study design, materials and methods

Jan 2015 - Feb 2016 , 22 patients
Laparoscopic retropubic radical prostatectomy
- appearance of prostate apex
- collected peri-urethral tissue

Two groups

- patients with or without inflammation.
- 4-peri-urethral core bench biopsy
extent of peri-urethral inflammatory infiltrate
collagen and elastin amount
- Verhoeff-van Gieson staining
elastin and collagen core amount
- visual scale grade : 0 to 3. Score
score 0 : without inflammation group (N=4)
score 3 : inflammation group (N=5).



A score 0

B score 3

fig) gross and microscopic findings of score 0 and score 3 group

- Clinical findings
international Prostatic Symptoms Score (IPSS)
National Institutes of Health/Chronic Prostatitis Symptom Index (NIH/CPSI)
- compared using the Mann-Whitney U test.

❖ Results

significant difference : two groups
International Prostatic Symptoms Score
($p < 0.05$)
NIH/CPSI ($p < 0.05$).

Patients with peri-urethral inflammation
- more severe LUTS and chronic pelvic pain.
- positive correlation
between inflammation
International Prostatic Symptoms Score
Bladder Outlet Obstruction Index
collagen amount
- inversely correlated
inflammation and elastin amount

❖ Interpretation of results

Fibrotic changes : peri-urethral prostate tissue
secondary to prostate chronic inflammation
-> promote urethral stiffness
This negative impact on urethral function
-> urinary obstructive symptoms
UTS not always associated
inflammation dependent prostate enlargement

Prostate inflammation and for inflammation-
dependent peri-urethral fibrotic tissue
Modifications

- > LUTS and chronic pelvic pain.
- Appropriate management of fibrosis
-> ultimately also benefit patients presenting
with coexisting LUTS.

❖ Concluding message

This experimental study suggests that prostate
inflammation may induce fibrotic changes
within the peri-urethral prostate tissues
-> promote LUTS and pelvic pain

Further studies are needed
comprehensively understand the complex
biology of the prostate inflammatory network in
promoting different facets of LUTS severity and
potential therapeutic solutions.