

CLINICAL MANIFESTATION AND TREATMENT OF URINARY BLADDER LEUKOPLAKIA.

Hypothesis / aims of study

Many women with LUTS, that do not respond to standard treatment have the history of recurrent chronic cystitis. After the relief of inflammation and in the absence of UTI during cystoscopy, we may often reveal changes of bladder urothelium which are recognized as leukoplakia by morfologist. The purpose of our study was to find out if the removal of these zones by laser ablation would reduce LUTS.

Study design, materials and methods

137 women with mean age of 27 years old with chronic recurrent cystitis without leukocyturia and bacteriuria, period of dysuria lasting from 6 to 72 months were included in the study. They were given the PUF questionnaire (mean score 19 points), urinary diary (10 voiding per day mean), uroflowmetry was performed and the maximum flow rate was 17 ml/s mean, and the voided volume was 128 ml mean. Cystoscopic evaluation of the bladder was made, urothelial patches of abnormal appearance were biopsied, and morphological diagnose of leukoplakia made in all cases. In all women we performed laser ablation of leukoplakia zones in the bladder. We used a high-energy laser with wave length of 810 nm and output power of 16 Watts. Laser radiation passed through optical fiber with an outer diameter of 400 mk.

Results

The control measurement of symptoms was carried out after 1, 3, 6 and 12 months postoperatively. At follow-up in 1 month after treatment clinical improvement was observed in 122 patients (89%), 107 (78% of them) did not have any complaints. Positive statistically significant differences were found in PUF points, number of voids per day, maximum flow rate and voided volume.

Interpretation of results

In 6 months after surgery urinary frequency decreased by 1.7 times, and in 12 months - by 1.5 times compared to baseline ($p < 0,05$). Pain severity was 2.3-fold and 2.1-fold less after 6 and 12 months respectively when compared with the initial data ($p < 0,05$). Also we noted an increase of voided volume and increase of the maximum rate of urination. Cystoscopy at 6 months after treatment did not reveal areas of leukoplakia of the bladder in 131 (95.6%) patients.

Concluding message

Laser ablation due to the removal of urothelial patches of abnormal appearance eliminates persistent symptoms of dysuria and chronic pelvic pain syndrome with minimal surgical trauma, good haemostasis, no intraoperative complications and a brief period of postoperative rehabilitation.

Disclosures

Funding: public financing **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Local ethics committee of St. Peterburg State Medical University named after acad. IP Pavlov **Helsinki:** Yes **Informed Consent:** Yes