Laser Surgery for Bladder Leukoplakia

Introduction and Objective: Leukoplakia of the bladder is not a common condition, but in 25-42% it may be a basis for a carcinoma. Leukoplakia is characterized by squamous metaplasia of the transitional epithelium and keratinization. The clinical features are non-specific; diagnosis must be confirmed by cystoscopy with biopsies. As conservative treatment remains unsatisfactory, different surgery is recommended: from transurethral resection to radical cystectomy for extensive lesions.
Materials and Methods: There were 39 female patients 19 to 38 years (mean age 27.4) with low urinary tract symptoms (LUTS), such as suprapubic pain (37 / 94.9%), dysuria (35 / 89.7%), dyspareunia (31 / 79.5%) enrolled in the study. White plaque located on a mucosal surface of the trigone was found by cystoscopy, pathology showed keratinization of metaplastic squamous epithelium, that was estimated as leukoplakia. Twenty-one patients underwent standard transurethral resection (TUR) of bladder lesion, and 18 were operated with YAG-ND laser Dornier with local destruction in 6-8 points. Follow-up was 1 year.
Results: The length of laser operation was twice shorter then TUR; after laser surgery catheterization was not needed as well as analgesic. Bleeding after laser surgery was absent in all. Examination in one year showed that 13 (61.9%) patients from TUR group had about the same complaints, despite the of absence of signs of leukoplakia. In place of TUR there was scar tissue without normal urothelium. In the laser group only 2 (11.1%) patients had soft LUTS; cystoscopy showed regress of leukoplakia with restoring of normal urothelium.
Conclusion: Local laser surgery for bladder leukoplakia is superior to TUR and is recommended.