Eastern Journal of Medicine 3 (1): 1-3, 1998.

Transurethral incision of prostate in treatment of chronic bacterial prostatitis

VERİT A., İLBEY Ö., ÇIKILI N., SEMERCİ B.
Department of Urology, School of Medicine, Ege University, İzmir

Objective We aimed to find out the efficiency of transurethral incision of the prostate in chronic bacterial prostatitis.

Methods We evaluated 20 men with chronic bacterial prostatitis prospectively. Preoperative and postoperative evaluation included symptom questionnaires.

Results There was significant improvement in subjective symptom analysis of the 20 patients.

Conclusion Based on subjective and objective criteria, transurethral íncision of the prostate is an effective treatment option in men with chronic bacterial prostatitis who were not cured by antibacterial therapy.

Key words Chronic bacterial prostatitis, Transurethral incision of prostate

Introduction

Because of the chronicity and the unsatisfactory bacteriological studies, it is difficult to diagnose and treat the patients with prostatic infections. It is rare before puberty. Although the satisfactory serum and urine concantrations of various antibiotics can be maintained, concentrations of them in the prostatic tissue were unfavoriable (1). The antibacterial agents that can diffuse into the prostatic tissue must be choosen from the agents that effects the microorganism in the cultural reports. However, neither short nor long period of antibacteriological treatment were successful in the medication of chronic bacrerial prostatitis (CBP) (2). The intraprostatic injection of antibiotics was tried for the treatment but the results were not so hopeful (3). In young patients with CBP who were not treated medically, wide transurethral resection, or open prostatectomy are not suggestable because of their complications. Histologic findings are nonspecific in CBP specimens; the gland and ductular structures are filled with inflammatory cells, and chronic inflammatory cells are also seen in the surrounding stroma (4).

In this study, the results of the cases with CBP who underwent transurethral incision of prostate (TUIP) for the drainage of the inflammation and relieve of vesical outlet obstruction secondary to the inflamation were discussed.

Material and Method

Patients who attended to our department with prostatism symptoms were investigated. Anamnesis and full physical examination were obtained in all cases. Appropriate antimicrobial agents were used but it was not satisfactory in all patients.

Twenty patients with positive prostatic secret cultures and 10 white blood cells or more in the microscopy were included in the study. They were all given prior nonspesific antibiotherapy. In all cases, urethrocystoscopy was performed under general anesthesia. Then prostatic lateral lobes in the 3 and 9 o'cloc positions were incised with resectoscope and Collings knifes. Peroral quinolones that can influence to the prostatic tissue and secretions were used 400 mg/per day for ten days postoperatively.

The symptoms and prostatic secret cultures of all cases were evaluated in the early (15 days) and late (3 months) periods. Symptomps that were decreased more than 50% were accepted as improvement. The diagnosis of bacterial prostatitis was confirmed by quantitative bacteriologic localization cultures four-tube technique.

Results

The ages of the patients were between 21 and 51 years (median 37). The symptomatic period varied between 2 and 14 years. Urethroscopic findings were normal.

Pretreatment clinical symptoms and clinical recovery in the early and late periods of 20 patients are shown in Table I. As seen in the table, the subjective symptoms improved markedly. There was no postoperative complication.

The microorganisms that were produced in the cultures of prostatic secrets of the cases and improvement in the early and late periods are shown in Table II. Sucess rate was 75% in the third month control cultures.

Discussion

The age range of our patients (21-51 years) supported the fact that CBP is a disease of young and middle aged men (5). There are a lot of difficulties in the treatment of CBP in this sexually active period. A few numbers of antibiotic agents reach to a

Accepted for publication: 20 November 1997

Table I. Pretreatment clinical complaints and posttreatment early and late period improvement of the cases.

Symptoms	Number of cases	Improvement in the early period		Improvement in the late period	
		Number	%	Number	%
Dysuria	17	13	76.5	14	82.3
Frequency	11	6	54.5	8	72.7
Premature Ejaculation	9	5	55.5	6	66.6
Nocturia	11	6	54.5	8	72.7
Loss of force and Decrease of caliber of the stream	11	6	54.5	8	72.7
Hesitancy	6	3	50	5	83.3
Urethral discharge	3	3	100	3	100
Pain	3	2	66.6	2	66.6
			64 median		77.1 median

Table II. The microorganisms that were reproduced in the cultures of prostatic secrets and improvement in the early and late period.

Bacterial agent	Number of cases	Improvement in the early period	Improvement in the late period
E. Coli	6	5	5
Gram (+) Bacteria	10	7	8
Pseudomonas	2	-	-
Klebsiella	2	2	2
Total	20	14 (70%)	15 (75%)

therapeutic level in the prostatic secretion. In the medical treatment, tissue concentration of the antibiotic is more important than the cultural results (1,2). Different kinds of antibiotics various doses were used by many investigators (6-11). There are many opinions and discussions in the necessity of surgical treatment (12,13). Radical prostatectomy because of its total curability even suggested in the surgical treatment of CBP, but it is very invasive. The complications such as sexual impotance and urinary incontinence decrease the suggestibility of this operation for the patients in this sexually active period (14). Transurethral prostatic resection is an alternative procedure if all infected tissue was included (15). However it is very difficult to resect all infected tissue, especially when it is located in the peripheral zone.

Since some sensitive antibacterial agents can not diffuse adequately into the prostatic tissue, some others which can reach to a sufficient tissue concentration are not able to provide efficacy, and since the radical surgical treatment results are dissappointing, TUIP can be offered as an alternative treatment. The aim of the TUIP is the drainage of the secretions from the prostatic acinie and ducts. Establishment of a suitable environment for the microorganisms may be inhibited by the drainage. Drainage is maintained into the urethra by the incision in the 3 and 9 o'clock positions. Medical treatment followed this surgical treatment for probable urinary infection. TUIP seems suitable treatment option with a low morbidity in cases who are in sexually active period. Çelik et al. obtanied 70% clinical and 76% bacteriological success rates with TUIP (16).

By the pioneering of Orondi, the complications such as retrograde ejaculation, incontinence, bleeding and strictures in the treatment of benign prostate hyperplasia by unilateral and bilateral prostatic incisions were reported (17,18,19). With the incisions in 3 and 9 o'clock positions, preventing this kind of complications is an advantage in the sexually active patients.

The high clinical and bacteriological success rates reached in our study also give hope for the treatment of CBP with TUIP. We believe that along-term study will give more reliable results.

References

1. Meares EM: Prostatitis and Related disorders: Chronic Bacterial Prostatitis. In: Campell's Urology. Sixth Ed, W.B. Saunders Comp. USA 1992, pp:815-822
2. Pfau A: Prostatitis: A Continuing Enigma. Urol Clin North Am 13: 695,1986
3. Baert L, Mattelaer J, DeNollin P: Treatment of chronic bacterial Prostatitis by local infection of antibiotics into prostate. Urology 21:370-375,1983
4. Kohnen PW, Drach GW: Patterns of inflamation in prostatic hyperplasia: A Histologic and bacteriologic study. J Urol 121: 755-760,1979.
5. Kendi S : Prostat ve Hastaliklari. Hacettepe Üniv. Basimevi. Ankara.1980, pp:27.
6. Meares EM : Long-term therapy of chronic bacterial prostatitis with trimethoprim-sulfamethoxazole. Can Med Assoc J (Suppl) 112: 22-25,1975.
7. McGuire EJ, Lytton B : Bacterial Prostatitis: Treatment with trimethoprim-sulfamethoxazole. Urology 7 : 499-500,1976.
8. Pfau A, Sacks T: Chronic bacterial prostatis: New therapeutic aspects. Br. J Urol 48: 245-253,1976.

9. Meares EM, Stamey TA: Bacteriologic localization patterns in bacterial prostatitis and ürethritis. Invest Urol 5: 492-518,1968.
10. Paulson DF, Zinner NR, Resnick MI, Childs SJ, Love T, Madsen P0: Treatment of bacterial prostatitis. Comparison of cephalexin and minocycline. Urology. 27: 379-387,1986.
11. Goldfarb M: Clinical efficacy of antibiotics in treatment of prostatitis. Urology. 24 (Suppl):12,1984.
12. McNeal JE: Regional morphology and pathology of the prostate. Am. J. Clin Pathol 49: 347-357,1968.
13. Smart CJ, Jenkins JD : The role of transurethral prostatectomy in chronic prostatitis. Br J Urol 45: 654-662,1973.
14. Meares EM: Nonspesific infections of the Genitoürinary Tract : Chronic Bacterial Prostatis. In: Smith's General Urology Thirteenth ed. Appleton- Lange. USA 1992. pp:224
15. Meares EM : Chronic Bacterial Prostatitis : Role of Transurethral Prostatectomy (TURP) In Therapy. In: Therapy of Prostatitis. Münich, W. Zuckschwerjt Verlag 1986, pp:193.
16. Çelik I, Yıldız S, Yılmaz AF, Sarıkaya S: Kronik bakteriyel prostatit tedavisinde transüretral insizyon. Türk Üroloji Dergisi .17: 79 .1991.
17. Orandi A: Transurethral incision of prostate (TUIP) : 646 cases in 15 years - a chronological appraisal. Br J Urol 57: 703-707,1985.
18. Kelly MJ, Roskamp D, Leach GE: Transurethral incision of the prostate: A preoperative and postoperative analysis of symptoms and urodynamic findings. J Urol 142:1507-1509,1989.
19. Soonawalla PF, Pardanani DS: Transurethral incision versus transurethral resection of the prostate ; A Subjective and objective analysis. Br J Urol 70:174-177,1992.

Correspondence to:

Dr. Ayhan Verit

Ege Üniversitesi Tıp Fakültesi

Üroloji ABD Bornova, İzmir, TÜRKİYE