Original article

SEXUAL FUNCTION AFTER PROSTATECTOMY

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The aim of the study was to investigate the influence of transurethral and transvesical prostatectomy on the sexual function.

Forty patients with the confirmed benign prostatic hyperplasia were analyzed. Transurethral and transvesical prostatectomy were performed in all patients. IIEF score was studied before, as well as three and six months after the surgery. All results were compared with the results of control group.

Sexual function was not significantly improved after surgery. There was statistically significant difference between operated patients and control group both in symptoms of sexual function.

Sexual function did not significantly improve after the surgery. In addition, the improvement of sexual function was not registered postoperatively, and differed significantly from the control group sexual function. *Acta Medica Medianae 2007;46(3):27-30.*

***Key words**: sexual function, prostatectomy*

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Introduction

Benign prostatic hyperplasia (BPH) is a very frequent disorder in men in senium. It is characterized by hyperplasia of the inner (submucous) glands of the prostate. BPH induces urine outflow obstruction, consequently causing morphological and functional disorders of the lower and upper urinary tract.

Patients with BPH in addition to other problems frequently encounter weak or no erection at all (1). Many of these patients are at the age when reduced testosterone secretion and decrease in sexual function occur. The older patients are, the sexual dysfunctions occurs more frequently (2).

However, apart from the age, sexual dysfunctions in patients with BPH are caused by urine retention, LUTS, bad general health and a fear of disease (3). Amelioration of these disorders after the surgery, as well as the general rehabilitation of the body, are usually followed by achieving potency which can be even better than before the surgery.

Methods

Sexual function of patients diagnosed with BPH has been researched in 40 patients (whose average age is 68) treated and exposed to transurethral resection of the prostate and transvesical prostatectomy at the Urology Unit of the Hospital in Prokuplje and Urology Clinic in Nis. This research encompassed the period of their illness before the surgery and up to six months after the surgery. None of them had an indwelling catheter.

In addition, there is a control group comprising healthy men who are blood donors and who regularly undergo medical tests and who filled in a standardized questionnaire. Their average age is 64.The results of the control group were compared with the results of the patients after the surgery.

For the statistical evaluation of the research objectives, the Student's t-test was used. The significance level used was $p<0,05$ and $p<0,001$.

The patients were treated by means of: anamnesis, objective examination, rectal examination of the prostate, basic biochemical examination, ultrasound prostate scanning and ultrasound measurement of residual urine, obtaining data by testing the patients with a standard sexual function questionnaire – IIEF (4).

The tests were carried on before transurethral or transvesical prostatectomy and three and six months after the surgery.

Results

Before surgery, the patients had the lowest score in the question about erection duration and difficulties while maintaining it. Moreover, the score of the question about pleasure during the intercourse was low. The patients from both tested groups had a low and almost identical score.

Table 1. Shows IIEF score before and after TURP, as well as the values of this questionnaire in the control group

Question	Before operation Xsr±SD	After oper3. Xsr±SD	After oper.6 Xsr±SD	Cont.group Xsr±SD
Ability to maintain erection	1,6±1,0	1,6±0,8	1,6±0,8	2,8±0,7
Erection hard enough for penetration	2,1±1,1	2,2±1,5	2,4±1,4	3,8±1,1
How often one maintains erection during the intercourse	1,0±1,3	1,1±1,2	1,1±1,0	2,0±1,3
Effort with which erection is maintained	1,2±1,0	1,2±1,0	1,3±1,1	2,4±1,1
Satisfaction during the intercourse	1,5±0,9	2,1±1,4	3,8±1,1	4,0±1,2

Table 2. Average values of each IIEF symptom respectively before and after TURP and in the control group

Question	Before operation Xsr±SD	After oper3. Xsr±SD	After oper.6 Xsr±SD	Cont.group Xsr±SD
Ability to maintain erection	1,6±1,0	1,6±0,8	1,6±0,8	2,8±0,7
Erection hard enough for penetration	2,3±1,1	2,4±0,7	2,4±1,0	3,8±1,1
How often one maintains erection during the intercourse	1,0±1,3	1,1±1,2	1,0±1,2	2,0±1,3
The effort with which erection is maintained	1,3±1,0	1,3±1,0	1,4±1,1	2,4±1,1
Satisfaction during the intercourse	1,5±0,9	2,6±1,1	3,8±1,2	4,0±1,2

Table 3. Statistical significance six months after TURP and TVP compared to the control group for IIEF questions

Question	After TURP-a	After TVP-a
Ability to maintain erection	p=0,33	p=0,33*
Erection hard enough for penetration	p=0,54*	p=0,51*
How often one maintains erection during the intercourse	p=0,45*	p=0,31*
Effort with which erection is maintained	p=0,45*	p=0,48*
Satisfaction during the intercourse	p<0,05	p<0,05

* Statistically insignificant difference

Chart 2 shows IIEF score before and after TVP, as well as the values of this questionnaire in the control group.

Statistical significance for each question in IIEF is shown in Chart 3.For the question concerning achieving sexual satisfaction, the significance level is p<0,05 for each of the tested groups.That is the only symptom that was significantly improved in all groups after the surgery.For all other symptoms, the significance level was also almost identical after the surgery. But, there was no statistical significance.This fact indicates that there is no significant exception between the two tested groups which implies that the level of damage in sexual function is equal in the patients that underwent TURP and TVP[5].

By means of a Student's t-test it was proven that there was no statistically significant difference in sexual function before the surgery and six months after TURP and TVP(for the level of significance p=0,079).

Also, there is no statistically significant difference in sexual function before the surgery and three months after TURP and TVP(for the level of significance p=0,28).

The difference in sexual function of the patients three months after TURP and TVP compared to the period of six months after them is not statistically significant (for the level of significance p=0,6).

The difference in sexual function of the patients six months after TURP compared to the control group is statistically significant (for the level of significance p<0,001).

The difference in sexual function of the patients six months after TVP compared to the control group is statistically significant for the level of significance p<0,001).

By means of a Student's t-test it was proven that there was no statistically significant difference in sexual function between the patients that underwent TURP and TVP(for the level of significance p=0,17).

Discussion

The connection between BPH and sexual dysfunction exists despite the idea that BPH does not have a direct influence on sexual function (6). Sexual dysfunction can very negatively affecting life quality of older population of men (7). According to a research, 42% of men diagnosed with BPH that were over 50 stated that, in their opinion, »sex was important» or »very important» (8).

Earlier researches suggested a high percentage of sexual dysfunction after a surgical treatment of BPH (3-35% after TURP and 5-39% after open prostatectomy) (9). In contemporary researches, occurrence of sexual dysfunction exists in 5-7% of patients after both surgical treatments (10).Other contemporary studies describe that improvment of sexual function occurs in up to 10% of patients, but authors mostly think that improvement of sexual function is very rare after surgical procedures.

A sexual disfunctions was present in patients before the surgery in 57,5% (11). After the surgery, the percentage of patients with erectile dysfunction was 55%.

The patients from both groups (TURP and TVP) had very low IIEF preoperative scores. Before the surgery, the patients had problems mostly in maintaining erection and achieving sexual satisfaction.

As far as the capability of a patient to acheive and maintain erection (questions 1, 2, 3, and 4) is concerned, there was no score improvement after the surgery. Score improvement for these question in IIEF probably failed, because removing hyperplastic prostate did not bring about disappearance of basic causes of erectile dysfunction.

After the surgery, the only significant score improvements were these concerning sexual desire and achieving sexual satisfaction in both groups and the results were more significant in TURP patients (12).This implied that sexual desire and achieving sexual satisfaction were important only for the patients without serious urinary symptoms.

There was no significant difference in sexual function of the patients that underwent TURP compared to the ones that underwent TVP. This finding proves the claim that sexual dysfunction is nowadays considered to be a rare complications of TURP (13). It also shows that TURP tehnique has become advanced, so that sexual function is retained in both TURP and TVP patients if they had it before the surgery.

Conclusion

There is no significant difference in sexual function between the patients that underwent TURP and the ones that underwent TVP.There is no significant difference in patients before and after the surgery.

There is no significant difference in sexual function between the patients after the surgery and the control group, where no improvement of sexual function in patients occured regardless of the surgical procedure they underwent.

However, it should be emphasized that there are respective symptoms related to the feeling of subjective pleasure during the sexual intercourse which show significant improvement after the surgery.

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SEKSUALNA FUNKCIJA NAKON PROSTATEKTOMIJE

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Cilj rada bio je utvrditi da li transuretralna resekcija prostate i transvezikalna prostatektomija utiču na seksualnu funkciju bolesnika.

Ispitivano je 40 bolesnika obolelih od benigne hiperplazije prostate. Bolesnici su operisani metodom transuretralne resekcije prostate i transvezikalnom prostatektomijom. Bolesnici su popunjavali standardizovan upitnik IIEF (upitnik seksualne funkcije) pre operacije, tri meseca i šest meseci nakon operacije. Rezultati su upoređivani sa rezultatima kontrolne grupe.

Ne postoji statistički značajna razlika u seksualnoj funkciji pre i posle operacije. Razlika u seksualnoj funkciji kod bolesnika šest meseci posle operacije u odnosu na kontrolnu grupu je statistički značajna.

Nakon operacije nije došlo do popravljanja seksualne funkcije bolesnika. Takođe, postoperativno se ne registruje značajno poboljšanje seksualne funkcije i značajno se razlikuje od seksualne funkcije kontrolne grupe. *Acta Medica Medianae 2007;46(3):27-30.*

Ključne reči: *seksualna funkcija, prostatektomija*