THE INCIDENCE OF ED AFTER TURP AND TVP ON BPH PATIENTS

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ABSTRAK

Tujuan Penelitian: *Tujuan dari penelitian ini adalah untuk mengetahui angka kejadian Disfungsi Ereksi (DE) setelah tindakan reseksi prostat transurethral (TURP) dan prostatektomi transvesika (TVP).* ***Bahan & Cara:*** *Pengumpulan data dilakukan dalam kurun waktu 1 tahun, mulai bulan Januari sampai Desember 2005. Didapatkan 60 pasien yang memenuhi kriteria inklusi dan eklusi, dan pasien yang berpartisipasi pada penelitian ini dilakukan Reseksi prostat transurethral dan prostatektomi transvesika dan dibagi dalam kelompok Reseksi prostat transurethral dan prostatektomi transvesia. DE diukur dengan International Index of Erectile Function-5 (IIEF-5), data dianalisa secara statistik dengan metode chi-square dan independent t-test.* ***Hasil Penelitian:*** *Enam puluh pasien yang mengikuti penelitian ini dibagi menjadi dua kelompok dengan masing-masing kelompok berjumlah 30 pasien. Rerata usia yang dilakukan reseksi prostat transurethral adalah 64 ± 5,68 dan prostatektomi transvesika adalah 63,23 ± 4,83 dengan usia berkisar dari 50 - 70 tahun. Angka kejadian DE setelah reseksi prostat transurethral and prostatektomi transvesika adalah 36,67% dan 16,70% dimana p = 0,08. Skor IIEF-5 reseksi prostat transurethral and prostatektomi transvesika adalah 19,40 ± 3,95 dan 21,03 ± 2, dan ini tidak berbeda secara signifikan.* ***Simpulan:*** *Angka kejadian DE setelah reseksi prostat transurethral lebih tinggi dari prostatektomi transvesika namun tidak berbeda secara signifikan.*

Kata Kunci: *Pembesaran prostat jinak, disfungsi ereksi, reseksi prostat transurethra, prostatektomi transvesika.*

ABSTRACT

Objective: *The aim of this study was to know the incidence of erectile dysfunction (ED) after transurethral resections of the prostate (TURP) and transvesical prostatectomy (TVP).* ***Material & method****: Data were collected in 1 year period from January until December 2005 with cross sectional study design. There were 60 patients who met the inclusion and exclusion criteria and patient who participated in this study underwent TURP and TVP and divided in TURP group and TVP group. Erectile Dysfunction measured by International Index of Erectile Function-5 (IIEF-5) data was analyzed by statistic chi-square and independent t-test.* ***Results****: Sixty patients include this study with 30 patients in each group. The mean age of TURP was 64 ± 5,68 and TVP was 63,23 ± 4,83 with age ranging from 50 – 70 years. The incidence of ED after TURP and TVP was 36,67% and 16,70% respectively with p = 0,08. The IIEF-5 scores for TURP and TVP was 19,40 ± 3,95 and 21,03 ± 2,57 respectively and by statistical analysis the differences was not significant.* ***Conclusion****: The incidence of ED after TURP showed higher than TVP and by statistical analysis the differences was not significant.*

Keywords: *Benign prostatic hyperplasia, erectile dysfunction, transurethral resection of the prostate, transvesical prostatectomy.*

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INTRODUCTION

Benign prostatic hyperplasia (BPH) is but one cause of the LUTS in aging men commonly. Ekman suggested that the increase in the fibro muscular stroma is a result of sexual activity,[1] and many authors since then have attempted to find relevant associations,[2] reported a 49% reduction in risk for prostatectomy in widowed versus single men. Similar association could not be verified by other authors. The decrease in sexual ability and frequency of sexual activity with advancing age, exactly when the prevalence of BPH increases, in fact might suggest a reverse relationship, namely, a causative effect of BPH

on sexual function.[3] More recent evidence suggests that when controlling for age, increased symptom severity is associated with an increased risk for erectile dysfunction.[4]

The International Prostate Symptom Score (IPSS), which is identical to the AUA Symptom Index, is recommended as the symptom scoring instrument to be used for the baseline assessment of symptom severity in men presenting with LUTS.[5,6] When the IPSS system is used, symptoms can be classified as mild (0 to 7), moderate (8 to 19), or severe (20 to 35). The symptom score should also be the primary determinant of treatment response or disease progression in the follow-up period.[7]

After patients have been evaluated, they should be informed of the various therapeutic options for BPH.[7] Specific treatment recommendations can be offered for certain groups of patients. For those with mild symptoms (symptom score 0-7), watchful waiting only is advised. On the other end of the therapeutic spectrum, absolute surgical indications include refractory urinary retention (failing at least one attempt at catheter removal), recurrent urinary tract infection from BPH, recurrent gross hematuria from BPH, bladder stones from BPH, renal insufficiency from BPH, or large bladder diverticula.[5]

Open simple prostatectomy When the prostate is too large to be removed endoscopically, an open enucleation is necessary. What constitutes "too large" is subjective and will vary depending upon the surgeon's experience with (transurethral resections of the prostate) TURP. Glands over 100 g are usually considered for open enucleation. Open prostatectomy may also be initiated when concomitant bladder diverticulum or a bladder stone is present or if dorsal lithotomy positioning is not possible,[7,8] such as a man presents with ankylosis of the hip or other orthopedic conditions Also, it may be wise to perform an open prostatectomy in men with recurrent or complex urethral conditions, such as urethral stricture or previous hypospadias repair, to avoid the urethral trauma associated with TURP.[8]

Urethral strictures are the most common late complication of transurethral prostate surgery. They should be considered in any patient who underwent TURP who has symptoms of outlet obstruction or a peak flow rate of 10 mL/s or less. Urethral strictures or bladder neck contractures appear in 3,7% of patients. Strictures occur because of insertion of a resectoscope sheath that is too large urethral trauma during the procedure, use of a large-caliber catheter, or infection.[9]

The etiology of bladder neck contractures is less certain, although they definitely seem to be related to the size of the gland, with smaller prostates being more likely to produce a bladder neck stricture than larger glands. Bladder neck contractures are less common after open prostatectomy, probably because of the very large size of the prostates normally resected at open surgery. Bladder neck contractures typically start to occur 4-6 weeks after transurethral prostate surgery.[9]

Risks of TURP include retrograde ejaculation (75%),[7] retrograde ejaculation results from the destruction of the bladder neck during TURP. During normal ejaculation, the bladder neck closes under sympathomimetic influence, allowing the semen to flow forward. The bladder neck is unable to close after TURP, permitting semen to flow backwards into the bladder. This is a very common sequela after TURP, occurring in 70,4% of patients. This should be carefully discussed with the patient before surgery because many patients confuse ejaculation with potency and may incorrectly consider themselves to be sexually impotent. It also may be quite alarming to the patient to unexpectedly find that he has a dry ejaculate after a TURP.[9]

Erectile dysfunction occurs in 3-5% of patients undergoing an open prostatectomy, it is more common in older men than in younger men. Retrograde ejaculation occurs in 80-90% of patients after surgery. The risk of this adverse effect is reduced if the bladder neck is preserved at the time of surgery. Also, 2-3% of patients will develop a bladder neck contracture 6 to 12 weeks after an open prostatectomy. This commonly occurs in men who have a relatively small opening at the bladder neck at the end of the operation.[8]

OBJECTIVE

The aim of this study was to know the incidence of erectile dysfunction (ED) after transurethral resections of the prostate (TURP) and transvesical prostatectomy (TVP).

MATERIAL & METHOD

This was cross sectional study design. Data were collected in 1 year period from January until December 2005 in Sardjito Hospital Yogyakarta. There were 60 patients who met the inclusion and exclusion criteria. The inclusion criteria included

patients who agreed to underwent prostatectomy, their aged was 50 to 70 years old, did not have erectile dysfunction before, sexually active, did not have any chronic disease such as diabetic mellitus, hypertension, systemic heart disease and chronic obstruction pulmonary diseases. The exclusion criteria were patient who did not agree to undergo prostatectomy and whom histopathological result was prostate cancer.

Patient who participated in this study underwent TURP and TVP and divided in TURP group and TVP group. They asked to answer IPSS and IIEF-5 questionnaire before prostatectomy and 3 months after prostatectomy they asked for IIEF-5 questionnaire to evaluate ED. Data was analyzed by statistic chi-square and independent t-test.

RESULTS

The characteristic of the subject was listed in table 2. The mean age was 64,03 ± 5,68 for TURP and 63,23 ± 4,83 for TVP with age ranging from 50 – 70 years old. The most common occupation for TURP (59,38%) was civil servant and private officer and for TVP were farmer and worker (60,71%). The academic level was advanced for TURP (60,87%) and elementary for TVP (56,76%). Urban area was the most common patient came from for TURP (60,87%) and for TVP was came from rural area (60,00%). The comparison of IPSS between TURP and TVP was 22,70 ± 3,2721 and 17 ± 3,28 respectively by statistical analysis the differences was not significant.

The comparison between IIEF-5 scores after TURP and TVP was not significant ($p > 0,05$). The incidence of ED between TURP and PTV was not significant ($p > 0,05$) and the differences between age and incidence of ED was not significant.

The IPSS was used to evaluate the symptoms of BPH and the differences between IPSS and the incidence of ED was not significant, although subject who did not have ED showed IPSS lower than subject who had ED. The comparison between severe IPSS before prostatectomy and incidence of ED after prostatectomy was not significant ($p > 0,05$).

The comparison between IIEF-5 scores before operation and the incidence of ED was not significant ($p > 0,05$).The comparison between academic level and the incidence of ED was not significant ($p > 0,05$) and the comparison between the incidence of ED and demographic was not significant ($p > 0,05$).

DISCUSSION

BPH is the most common benign tumor in men, and its incidence is age-related. The prevalence of histology BPH in autopsy studies rises from approximately 20% in men aged 41 – 50, to 50% in men aged 51 – 60, and to over 90% in men older than 80.[7] Surgery is still an option to improve the IPSS and objectively will increase the flow of urine. TURP and TVP are common to procedures for BPH clinical. These procedures have advantages and disadvantages, and one of the complications is ED.

This study was performed in Sardjito Hospital and 60 BPH patients were participated (30 TURP patients and 30 TVP patients). The mean age was 64,03 ± 5,68 for TURP and 63,23 ± 4,83 for TVP with age ranging from 50 – 70 years old. The most common occupation was farmer and worker. The academic level was elementary, and urban area was the most common patient.

The comparison of IPSS between TURP and TVP was 22,70 ± 3,2721 and 17 ± 3,28 respectively by statistical analysis the differences was not significant. The comparison of IIEF-5 scores before prostatectomy between TURP and TVP was significant ($p < 0,05$) but clinically the IIEF-5 scores for TURP group (22,30) and TVP group (23,40) was not significant because the IIEF-5 scores was not in ED diagnosis scores.

The incidence of ED for TURP group was 36,67% and for TVP group was 16,70% respectively. The mean IIEF-5 scores after TURP was 19,40 and it was lower than PRV group (21,03). Thierny et al found the incidence of ED after TURP was higher than TVP (25,7% vs. 19,0%).[10] Another study Poulakis et al found the ED after TURP rate was 65%,[11] Ozkara et al found the incidence of ED after TURP and TVP was 18 from 58 patients,[12] meanwhile Pawlicki B et al found the incidence of ED was 25%,[13] Taher A found the incidence of ED after TURP was 14%,[14] Oh SK et al reported the incidence of ED after TURP was 43%.[15] Erectile dysfunction occurs in 3% to 5% of patients undergoing an open prostatectomy.[8] These study showed that incidence of ED afar TURP was higher than TVP but by statistical analysis the difference was not significant. It was understood, the TURP was done with resectoscope via urethra and the adenoma was resected by cutting loop using thermal energy (electrocauter) and it may damage nerve tissue including n.pudendus. In the other hand, PTV removed only the hyperplasic prostate.

CONCLUSION

In this study we found that the incidence of ED after TURP was higher than TVP but no significant difference between both procedures. TURP and PTV are acceptable procedures for BPH clinical.

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