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EXPERIENCE WITH BLADDER NECK INCISION TO RELIEVE BLADDER OUTLET OBSTRUCTION VERSUS TRANSURETHRAL RESECTION OF THE PROSTATE IN SHIRAZ

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ABSTRACT

TUR is cited as the treatment of choice for relief of bladder outflow tract obstruction in the male, but bladder neck incision (BNI) is an acceptable alternative when the gland is small.[1,2,3] Sixty cases of BNI/TUR have been reviewed (BNI=35, TUR=25) from March, 1986 to April, 1988.

BNI was done when the glands were less than 30 gr, and when there was no clinical suspicion of malignancy the operative technique of our single incision is given.[4] In BNI the catheter stay was shorter, and there was less infection, a significantly reduced need for blood transfusion, and satisfactory outcome in terms of control and need for further surgery. BNI is a technically simpler procedure than TUR and is easy to teach and learn.[5] Our results show it is safe and effective for patients in acute retention as well as those treated electively and is the operation of choice for a small benign prostate. In larger glands BNI may not be desirable. In matched cases this method provided better results and fewer complications than the standard transurethral resection.

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INTRODUCTION

TUR is generally accepted as the best treatment for symptomatic BPH in all but the largest glands.[6] However, TUR is a technically demanding procedure and inexperienced operators may be unable to match the good results and low complication rate reported from specialist urological units.[7,8]

Bladder neck incision (BNI) originally described by Bottini in 1887 and recently advocated by Ewards and Powell (1982), and Turner Warwick (1973) is a simple, quick and safe procedure for relieving outflow obstruction when the prostate is small and benign.[2,9]

Thirty five patients underwent BNI between March, 1985 and April, 1987. The results and complications of these procedures are compared with those in the 25 patients wiht larger benign glands treated by TUR over the same period of time.

MATERIAL AND METHODS

Sixty males with ouflow obstruction due to BPH were treated by endoscopic surgery in this center between March, 1985 and April, 1988. All patients underwent clinical examination, a complete blood count, urea and electrolyte examinations, urinalysis, urine culture and IVP as well as measuring residual urine and uroflowmetry.[10] The choice of surgical procedure was made after cystocopy and bimanual examination under anesthesia. The criteria for performing bladder neck incision were a small prostate (30g or less) and a relatively short prostatic urethra. Patients with large prostates or a long prostatic urethra were treated by TUR. Where there was any clinical suspicion of malignancy the initial procedure was limited to cystoscopy and prostatic biopsy. Thirty five men were treated by BNI and 25 by TUR. The BNI patients were

younger (mean age 57 years, range 30-75) than those in the TUR group (mean age 70, range 51-85).

Bladder neck incision was done under epidural or spinal anesthesia. Patients were placed in the lithotomy position and examined bimanually and endoscopically. The decision to perform BNI or TUR was made on the findings of this examination. Urethrotomy to 27 F. was performed with an Otis urethrotome. A resectoscope was passed (sheath No.27 F), and using Storz diathermy knife (27040 F), a cut was made along the sulcus in the 7 o'clock position from the right urethric orifice to the level of the verumontanum (left handed person can do this incision in the 5 o'clock position from left urethric orifice to the level of the verumontanum more easily). The cut was deepened to fat along whole length. Only minimal hemostasis
cases. Then two chips of prostatic tissue were taken by loop and sent for pathology. The resectoscope was withdrawn and a three-way 22 F Foley catheter was inserted into the bladder through the urethra for irrigation. In TUR group anesthesia was similar to that used for BNI. The instrument was similar to that used for BNI except that a cutting loop was fitted instead of a knife. The technique used was that described by Blandy.[7] After the resection of the glands, a three way Foley 22 F was inserted and irrigation continued until the urine became rose colored, usually 24 hours.

After TUR, the catheter was removed when the urine had become clear, usually on the second or third post-operative day. The urine usually cleared rapidly after BNI, and the catheter was removed as soon as possible post-operatively, frequently on the first post-operative day. Results of cultures from midstream urine samples taken before operation and after removal of the catheter was recorded. Preoperative broad-spectrum antibiotics were given to patients with preexisting urinary infections or patients coming to theater with an indwelling catheter. Blood transfusions were given in theater at the discretion of the anesthetist and post-operatively if the patient's hemoglobin was less than 10 g/dl. The major complications are recorded in Table I.

All patients were reviewed 8 weeks after discharge from hospital. Continence was assessed at this time and at subsequent follow-up when necessary. Our definition of incontinence included minor degrees of urge incontinence and dampness. The number and nature of further procedures undertaken were recorded. Uroflowmetry was done 8 weeks after operation and residual urine was measured at this time.

Table I. Complications

	BNI	TUR
No. of patients	35	25
Post-operative deaths	0	1
Clot retention requiring return to theater	0	1
Perforation and extravasation requiring return to theater	0	1
Septicemia	1	2
Incontinence after 1 year	1	0
Further procedure	0	3
Orchitis	1	0
Stricture	0	0
Pneumonia	1	0
Total	3(6.28%)	8(32%)

RESULTS

Preoperative urinary infection rates were rather similar in the two groups (BNI 14.3%, TUR 16%). Post-operatively, there was a small difference (BNI 17.1%, TUR 24.2%). No patient who had BNI required blood transfusion. Three patients were transfused during TUR, there was one post-operative death following TUR, due to acute myocardial infarction one day post-operatively (Table I). No patient died after BNI.

The details of the number of days of post-operative catheterization and hospital stay in each group are given in Table II.

Up to present time, no patient initially treated by BNI required further procedure. Three patients initially treated by TUR required further surgery, one had a BNI for stenosis of bladder neck and two had a further TUR for regrowth or incomplete resection.

DISCUSSION

This series can not be a randomized study, as criteria for admission to the two groups were entirely

Table II. Clinical Details

	BNI	TUR
No. of patients	35	25
Age range, (mean), years	30-75 (75)	51-85 (70)
Post-operative catheter stay (mean days)	2	5
Transfusion	0	3
UTI pre-op.	5(14.3&)	4(16%)
UTI post-op.	6(17.1%)	5(20%)
Uroflowmetry pre-op. (mean Max. flow rate)	7 ml/s	8 ml/s
Uroflowmetry post-op. (mean Max. flow rate)	18 ml/s	15 ml/s
Mean residual urine Pre-op.	150c	200c
Mean residual urine Post-op.	50cc	80cc

different.[1] It does, however, set the results and complications of bladder neck incision against those of transurethral resection, the latter done on patients with larger prostates in the same unit and during the same period. The results of TUR are comparable with those of the two large series from the London Hospital.[7,8] Bladder neck incision is a technically simpler procedure than TUR and is easy to teach and learn. We feel that the results show that it is a safe and effective treatment for outflow obstruction in patients with small benign prostatic hypertrophy. In this series BNI proved equally satisfactory for patients in acute retention and for patients treated electively.[11] We employed a single incision technique in contrast to the double incision advocated by Turner-Warwick and Delaere, et al.[9,12] The importance of the single incision technique is a long deep cut extending to perivesical fat along the whole length. [13] Removal of the urethral catheter was done as soon as possible, usually one day post-operatively. Stay in hospital for BNI patients was significantly shorter than that of TUR.

No sexual dysfunction appeared in our patients after BNI, comparable with the results of Blandy and Orandi[1,14] in a series of 40 patients treated by unilateral BNI. However, our overall figures suggest that BNI appears comparable with TUR in the relief of obstruction due to a small benign prostate, provided that case selection is correct and the procedure is undertaken as described.

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