

1767 TRANSURETHRAL RESECTIONS*

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Over the last ten years 1584 transurethral prostatectomies have been performed in Adana, about one third at the university hospital and the remainder at a private clinic. One hundred eighty-three bladder tumors were resected transurethrally at the university hospital by residents in urology.

The successful use of transurethral resection (TUR) depends greatly on the surgeon's skill and experience with the technique, aided by the improved instruments available nowadays and our better understanding of the pathophysiology involved. Endoscopic surgery is a must.

The instruments required and their maintenance pose problems in countries which must import them and where foreign exchange restrictions are imposed as in Turkey. The new instruments are much improved, especially as regards optical visualization, but they require great care in order to keep them in working order for the maximum length of time.

A further problem encountered in Turkey when doing TUR concerns the irrigation solution. Since 1964 we have been using sterile distilled water, which has proven to be safe. Low pressure irrigation with aspiration and/or trocar cystostomy is recommended for surgeons just learning TUR. All our cases were irrigated with 50-30 cm of water pressure.

Great care is necessary in performing TUR as there is usually very little chance of repairing errors made in resection. Bleeding is a major problem to be avoided, as a clear view of the operating field is necessary. We recommend the rule "cut and coagulate; know what and where you are cutting".

The bulk of the adenoma is removed rapidly in the first half of the operation, leaving the entire second half for removal of apical tissue and the remainder of the adenoma close to the capsule. Thus careful attention will be given to avoiding perforations, openings into the venous sinuses, and external sphincter trauma. It is preferable to opt for a subsequent repeat TUR rather than to move too fast and risk such errors.

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Transurethral Prostatectomy

Following is a summary of the data concerning the 1584 transurethral prostatectomies in our series:

1. Mean age of patients: 69.7 years. Youngest patient: 44, oldest two: 112 and 124 years.
2. Largest adenoma resected: 240 grams. Time for resection: 137 minutes. Mean weight of resected adenomas: 34.8 grams. One 51-year-old patient had 84 grams of tissue resected, equivalent to 111.72 grams of adenomatous tissue unresected.
3. Only three patients required blood transfusions because of blood loss from TUR. This is a relatively bloodless prostatectomy with an average blood loss of about 2 ml per gram of tissue resected.
4. Early post-TURP clot evacuation or fulguration was required in 1.50% of the patients. 7% had some degree of venous bleeding, the majority of which stopped spontaneously. Nine cases required Foley balloon pressure pulling. It is important to note that no continuous irrigation was applied. Straight drainage was used.
5. 25 patients (1.57%) required care for water intoxication, mainly watching the vital signs closely and administering diuretics.
6. Early postoperative complications due to infection (including sepsis, 0.3%) were less than 1%, since most of the patients were operated on under antibiotic coverage which continued for about two weeks postoperatively.
7. No permanent incontinence observed; early short-term difficulty in holding urine improved spontaneously. Thirteen patients (0.81%) needed repeat TUR because of inadequate resection of the apical tissue.
8. Average hospital stay: 66 hours. The Foley catheter is removed as soon as the urine clears, usually within 48 hours.
9. Four patients died (0.25%).

Bladder Tumor TUR

TUR for bladder tumors saves both patient and urologist from the agony of multiple open surgical interventions. Data from the 183 bladder tumor resections performed by residents in urology are illustrated in Tables I - VIII. These patients show the usual age distribution, with the majority being in their sixth decade. Over 90% were male, Grade II stage A tumors predominated, but Grade III stage B1 tumors were encountered slightly more often than expected (20%). The finding of only 2.18% benign papillomas indicates that our patients generally postpone seeking medical care. About 68% of the cases had 10 grams or less of tissue resected, while four

patients had more than 30 grams resected. The main complication of TUR of bladder tumors is hemorrhaging, and thirteen patients required a repeat TUR, three of them even a third one, because of inadequate resection and bleeding. Only 21 patients reported six months after surgery for control cystoscopy, despite urging by the doctor.

TUR for superficial bladder tumors is ideal, since it can be repeated, and thus partial cystectomy is seldom needed.

**TABLES I - VIII Give Data Concerning 183 Cases of TUR
(October 19, 1976 - April 1984)**

**TABLE I
Age Distribution**

<u>Age</u>	<u>No. patients</u>	<u>%</u>
11 - 20	1	0.54
21 - 30	1	0.54
31 - 50	33	18.03
51 - 70	119	65.02
71 - 90	29	15.84
Total	183	100

**TABLE II
Sex Distribution**

<u>Sex</u>	<u>No. patients</u>	<u>%</u>
Male	168	91.81
Female	15	8.19
Total	183	100

TABLE III
Grade and Stage Distribution

<u>Histological Diagnosis</u>	<u>No. patients</u>	<u>%</u>
Stage 0	6	3.27
Grade I Stage A	4	2.18
Grade II Stage A	42	22.95
Grade II Stage B ₁	19	10.38
Grade III Stage B ₁	14	7.65
Grade III Stage B ₂	37	20.21
Grade IV Stage C	34	18.57
Undetermined	27	14.75
Total	183	100

TABLE IV
Histopathological Distribution

<u>Pathology</u>	<u>No. patients</u>	<u>%</u>
Transitional cell Ca	150	81.96
Epidermoid (squamous) Ca	6	3.27
Transitional cell papilloma	4	2.18
Undifferentiated Ca	4	2.18
Adenocarcinoma	3	1.63
Mesenchymal Ca	1	0.54
Hemangioma	1	0.54
Cystitis glandularis	1	0.54
Undetermined	13	7.10
Total	183	100

TABLE V
Resected Tissue Distribution

Resected Tissue (grams)	No. patient	%
1 - 10	124	67.75
11 - 20	47	25.68
21 - 30	8	4.37
31 - 40	4	2.18
Total	183	100

TABLE VI
Postoperative Complications

Complications	No. patients	%
Sepsis	1	0.54
Hemorrhage	5	2.54
Perforation	1	0.54
Total	7	3.82

TABLE VII
Patients Requiring Repeat TUR

Tumor type	Second TUR	Third TUR	%
Transitional cell Ca	10	3	7.10
Total		13	7.10

TABLE VIII

Post TUR Control Cystopanendoscopic Examinations up to 6th Month

<u>Cystopanendoscopic results</u>	<u>No. patients</u>	<u>%</u>
Normal	6	28.57
Recurrences	15	71.42
Total	21	100