

Acute urinary retention secondary to carcinoma of the prostate. Is initial channel TURP beneficial?

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Summary

Over a 2-year period patients presenting with acute urinary retention secondary to locally advanced prostate carcinoma (stage T3/T4) were randomized to one of two treatments. Ten patients underwent channel transurethral resection of prostate (TURP) and bilateral orchidectomy, 12 patients underwent bilateral orchidectomy alone.

Treatment by channel TURP and bilateral orchidectomy was complicated by difficulties in voiding in four patients, one requiring a further TURP.

Ten of the 12 patients were voiding well one month following bilateral orchidectomy alone. Only two patients in this group required TURP. In patients with acute urinary retention secondary to prostate carcinoma, in whom hormonal manipulation is thought appropriate due to bulk of local tumour or metastatic disease, channel TURP may confer extra morbidity and therefore be held in reserve for those patients unable to void after hormonal manipulation.

Introduction

Patients with locally advanced prostatic carcinoma may present in urinary retention, accounting for about 13.0%¹ of such patients.

Initial treatment of these patients can involve either channel transurethral resection of prostate (TURP) or hormonal manipulation, or both. Channel TURP has the advantage of early restoration of micturition but is not without morbidity. Previous studies² have suggested that hormonal manipulation alone is a preferable treatment for patients with locally advanced prostate carcinoma and urinary retention.

We set out to study patients with carcinoma of the prostate, stage T3 or T4 presenting with urinary retention in whom hormonal manipulation was considered necessary by virtue of metastases or bulk of local disease. These patients were randomized either to bilateral orchidectomy and channel TURP or bilateral orchidectomy alone, with removal of urinary catheter at one month. We report our findings in 22 patients.

Patients and methods

Over a period of 24 months, 22 patients presented to the Department of Urology with acute retention of urine secondary to carcinoma of the prostate so advanced that hormone manipulation was needed.

Patients who had histologically confirmed carcinoma, as defined above, were randomized into 1 of 2 treatment groups. One group (A) underwent channel TURP and orchidectomy simultaneously with removal of the urinary catheter shortly after surgery. The second group (B) underwent bilateral orchidectomy

Table 1. Results of treatment

	Group A: channel TURP+bilateral orchidectomy (n=10)	Group B: bilateral orchidectomy alone (n=12)
Mean age (years)	73.8	77.8
Differentiation:		
Poor	6	4
Moderate	4	7
Well		1
Stage:		
T4	8	7
T3	2	5
Bone metastases plain X-ray	6	3
Mean weight of chips (g)	12.35	—
Trial without catheter success:		
Post operation	5	—
1 month	4	10
2 months	1 (re-do TURP)	2 (TURP)
Mean total hospital stay (days)	11.4	10

alone with removal of urinary catheter at one month. Any patient in group B who failed a trial without catheter at one month was put forward for channel TURP.

Results

The two groups were similar in age (Table 1). There were more poorly differentiated tumours in group A. All procedures were performed under either general or spinal anaesthesia. The only morbidity occurred in the channel TURP group where two patients required blood transfusion and one patient suffered a coliform urinary tract infection. Four patients in group A were unable to void initially but a further trial without catheter at one month was successful. One patient in group A in whom the veru montanum was difficult to identify, required a further resection of apical tissue at 2 months. Two patients in group B were unable to void at 2 months and underwent successful TURP.

Discussion

The fact that orchidectomy reduces the size of a malignant prostate gland was noted in 1942 by Chute³. In his study of 13 patients with urinary retention secondary to carcinoma, nine were able to void following bilateral orchidectomy. Fleischman and Catalona² reported 35 patients with prostatic

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carcinoma presenting with urinary retention and 24 patients (68%) were able to void after orchidectomy alone.

In our study 10 out of 12 patients (83%) were able to void one month after bilateral orchidectomy alone. Following bilateral orchidectomy and channel TURP 4 patients were unable to void at one month and one required a further TURP. (All resections had been performed by senior surgeons.)

TURP in a large malignant gland can be technically difficult. The prostatic urethra may be rigid and both the veru montanum and external sphincter hard to identify with the associated risk of incontinence.

A further potential drawback to channel TURP is the risk of disseminating prostate cancer. Elder *et al.*⁴ reported decreased survival in patients with carcinoma of the prostate who had undergone previous TURP.

The only disadvantage to hormonal manipulation alone is the necessity for the patient to manage a urinary catheter for one month. If unable to void after this period a further trial without catheter is justified at 2 months. Original work by Huggins⁵ suggested maximal decrease in prostatic volume at 3 months.

Hormonal manipulation, of course, does not have to be by orchidectomy. Varenhorst and Alund⁶ were successful in relieving total urethral obstruction caused by carcinoma of the prostate in 65% of patients treated by either orchidectomy, cyproterone acetate or oestrogen. All were equally effective although the effects of orchidectomy appeared significantly earlier.

From our small series it would appear that channel TURP can be reserved for those patients who do not respond to bilateral orchidectomy. It must be stressed that all our patients had locally advanced (T3/T4), histologically proven carcinoma. Bilateral orchidectomy alone has a lower morbidity and in a patient

who presents an anaesthetic risk, may be performed under local anaesthetic. It will also result in a shorter hospital stay. If Elder *et al.* are correct then there may be a survival benefit from avoiding channel TURP.

We recommend that initial channel TURP is not carried out for patients presenting with urinary retention due to carcinoma of the prostate in whom hormone manipulation is necessary because of metastases or sheer bulk of tissue. In these circumstances channel TURP should be reserved for patients who cannot void 2 months after initiation of hormonal therapy.

Such a policy is not only more effective but saves theatre time and shortens hospital stays.

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