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Palliative Urinary Diversion in Adenocarcinoma of the Prostate

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Ten patients with inoperable prostatic carcinoma, producing ureteral obstruction and azotemia, underwent palliative urinary diversion. Good quality survivals of two months to three years were obtained. These results compare favorably with the good results seen in gynecologic neoplasm of the bladder, colon and breast. In selected cases of carcinoma of the prostate, palliative urinary diversion is indicated when the prospects exist for further benefit from chemotherapy or radiotherapy.

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Palliative urinary diversion to prevent rapidly progressive renal failure was performed on ten patients with ureteral obstruction and azotemia due to inoperable prostatic carcinoma. Survivals of two months to three years were obtained with relatively good quality of life. All of the diversions were performed during the six-year period ending January 1976, and as of February 4, 1976, five patients are alive and well.

Methods & materials

Unilateral nephrostomy was performed in all ten cases. The indications for diversion were progressive azotemia, massive hematuria, the patient's wishes, and plans for further chemotherapy or radiotherapy. Preoperative preparation for the planned urinary diversion included correction of electrolyte abnormalities, particularly hyperkalemia. In three patients, ureteral catheters were used for varying lengths of time to achieve a more optimal preoperative condition. Dialysis was not used in any case. The mean preoperative creatinine was 9.8 mg% and blood urea nitrogen 110 mg%. In most cases these values returned to normal within ten days after diversion. A massive diuresis of up to seven liters per day was seen in many patients, requiring appropriate fluid and electrolyte management.

Table 1

Patient	Age	Treatment	Survival (months)	Quality of Survival	Complications
F.P.	65	RN,BO	18	alive & well, with pain	None
J.F.*	70	RN,BO	36	pain free for 26 months	Pathological hip fracture, sepsis, hematuria
J.G.	67	LN,BO,RT	2	pain free, alert, ambulatory	None
J.F.*	68	LN,BO	3	pain free for 6 weeks but poorly ambulatory	Sepsis
J.M.*	64	LN	14	mild back pain	Hematuria
F.B.*	66	RN,BO, IVS,RT	23	pain free for 12 months, ambulatory, moderate pain for 4 months	Sepsis (2 occasions) hematuria
L.G.	63	LN,BO	16	ambulatory, pain free for 4 months, mild pain for 10 months	None
W.P.*	65	RN	10	pain free for 3 months	Sepsis
A.P.	64	LN,BO	17	ambulatory, pain free for 7 months, moderate pain for 4 months	None
C.G.	68	RN,BO	14	ambulatory, pain free for 8 months	Sepsis (2 occasions)

* Deceased.
Treatment code: *RN*–right nephrostomy; *LN*–left nephrostomy; *BO*–bilateral orchiectomy; *RT*–local radiation therapy; *IVS*–intravenous Stilphosterol.

Case report

F.P., a 65-year-old white man, was admitted to the Henry Ford Hospital Urology Service with stage D adenocarcinoma of the prostate. Admission BUN and creatinine were 60 mg% and 5.9 mg%, respectively. Intravenous pyelogram showed bilateral ureteral obstruction. Following bilateral therapeutic orchiectomy he had complete remission of bone pain with no effect on the ureteral obstruction. When the patient's creatinine level progressively increased to 9.0 mg%, a right nephrostomy was done. The patient has now been symptom-free for 18 months and has a creatinine level of 1.3 mg%.

Results

Pain from boney metastases was effectively managed with various combinations of oral estrogen, therapeutic orchiectomy, intravenous Stilphosterol, and local irradiation. Currently five patients are alive and well two months to two years after operation. In the series of ten patients, survivals currently range from two months to three years with a relatively good quality of life. (See table)

Discussion

Our series shows that in properly selected cases of adenocarcinoma of the prostate, a reasonable quality and length of survival can be obtained following palliative urinary diversion. Results compare favorably with gynecologic neoplasm but are in contrast to the uniformly poor results obtained with carcinoma of the bladder, colon, and breast. The decision to perform a palliative urinary diversion in the face of an inoperable neoplasm is made jointly by the patient, with his physician taking into account the patient's age, type of neoplasm, and the prospects of further benefit from chemotherapy or radiotherapy.