Anuria in a Case of Endometrial Carcinoma of the Uterus due to Radiation Fibrosis of the Ureter of a Solitary Kidney

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A 40 years old female (3rd para) presented in emergency with anuria of 36 hrs duration ad signs of acute renal failure. She had endometrial carcinoma of the uterus stage 3, four years ago and had received full course of external beam irradiation in 1996. Thereafter she was asymptomatic for 3 years. Then she developed urinary frequency and nocturia (due to reduced bladder capacity). An ultrasound revealed a single kidney on the left side with hydroureteronephrosis. The site of obstruction to the ureter was seen somewhere in the distal one third. The opposite kidney was congenitally absent. Her blood urea was 120 mg/dl and serum creatinine was 10.4mg/dl. A cystoscopy was done with the aim of DJ stenting. The left ureteric orifice was found to be pin hole and fibrosed. The right ureteric orifice and the corresponding hemitrigone were absent (indicative of agenesis). Retrograde catheterisation was attempted but there was no passage beyond 1 cms. The bladder capacity had reduced to 70ml. A nephrostomy was done immediately. Her renal profile improved gradually and returned to normal in about a week's time with the blood urea dropping to 30mg/dl and serum creatinine to 1.1mg/dl.

Fig. I

A CT scan of the abdomen and pelvis was done. It showed no evidence of metastasis to the solid viscera nor to any lymph nodes of detectable size. There was a residual fibrotic remnant (post radiotherapy) posterior to the bladder. Keeping in mind her young age, good GC and the nonprogressive course of the malignancy over the period of past 4 years she was taken up for surgery with the aims of

i) augmenting the bladder capacity

ii) re-implanting the ureter

On exploration once again the abdomen was thoroughly evaluated for presence of metastasis. There was no apparent evidence of metastasis. The uterus and adnexa were hard and fibrotic. The ureter was engulfed in this fibrotic tissue at the level of the mid sacrum leaving a defect of about 12cms to be bridged. The ureter was divided 2.5cms above the level of entrapment and held in bulldog clamp. She was then subjected to bladder augmentation with an ileo-caecal segment of the intestine. The caecum was anastomosed to the bladder with partial detubalrisation, thus increasing the capacity to 600ml. The ileum was taken upwards and the ureter was re-implanted into it over a DJ stent. The open end of the ileum was closed in three layers and fixed to the psoas muscle.

She recovered uneventfully and was discharged after 12 days. Nephrostomy and stent were removed after one month. She is under follow up for the last 6 months and is happy to be voiding per urethrally and with total relief from the urinary frequency and nocturia.

To conclude, this case highlights the feasibility of performance of a definitive and long lasting palliative procedure such as urinary tract diversion and reconstruction in patients developing ureteric obstruction and or bladder contractures secondary to malignancies or irradiation for malignancies of the uterus or cervix especially in patients with uncompromised general condition.