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Management of Carcinoma of Uterine Cervix with Pelvic Kidney

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Introduction

Cervical cancer complicated by a pelvic kidney has rarely been reported. Our review of the literature revealed two reports of carcinoma cervix and one report of rectal cancer complicated by pelvic kidney[1-3].

Radiotherapy plays a significant role in the management of early as well as late cervical cancer, but presence of renal ectopia complicates treatment delivery unless due care is taken to shield it in radiation portal. The kidney has a radiation tolerance of only 23 Gy, well below the dose required for carcinoma cervix. Alternatively, surgical transposition can be attempted but it is complicated by the aberrant blood supply to the kidney and a short ureter[4].

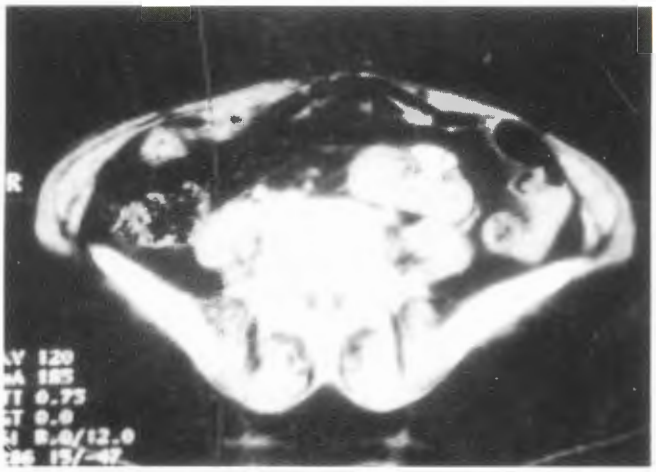
Case Report

A 60 year old woman presented on 18th September 2000, with bleeding per vaginum of four months duration. The bleeding was intermittent with moderate flow. She had no other complaints.

Her general and systemic examination were unremarkable. Gynecologic examination revealed IIB cervical carcinoma. An investigative workup showed a functioning left pelvic kidney located against L_3 and L_4 vertebrae and a cervical mass of size 6.0 x 4.3 x 5.1 cm, punch biopsy of which showed squamous cell carcinoma, Grade III.

As the ectopic kidney was functioning normally and no surgical expertise was available at our center for its transposition outside the pelvis, we decided to shield it in the treatment field. Her pretreatment blood urea was 27mg% and serum creatinine 0.8mg on 19th November 2002. Accordingly, she was planned for external pelvic radiotherapy with standard AP-PA portals. At the time of simulation, a custom made lead shielding block was designed to protect the kidney. The patient was treated in prone position, because of improper shielding of kidney in supine position. The anterior portal was irradiated through couch. The dose delivered was 45 Gy / 20# over four weeks. One week later, an additional dose of 30 Gy was delivered by intracavitary radiation.

Posttreatment examination showed complete regression of growth. No untoward effects of radiation on pelvic kidney were noticed during follow-up period (Photograph 1). On 22nd November 2002, her blood urea was 31mg% and serum creatinin 1.0mg%. The women is alive and doing well 25 months after radiotherapy.



Photograph 1: Posttherapy CECT scan of the pelvic kidney.

Discussion

No standard recommendations are found in the literature about correct techniques of irradiation in a patient with carcinoma cervix with pelvic kidney. An ectopic kidney usually shifts its position to the approximate level of first lumbar vertebra, so it can be very well excluded from the treatment portal, but sometimes the kidney may shift to lower lumber vertebral level, where it naturally comes in the treatment field as seen in our patient. In such a situation, there is no option but to shield it in the treatment portal unless it can be surgically transposed outside the pelvis. There is always a possibility of sparing the lymph nodes draining cervix behind the pelvic kidney.

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Irradiation beyond tolerance leads to radiation induced nephropathy which is a slowly progressive, non-inflammatory disease with wide clinical and histological spectrum, depending upon total dose, fractionation schedule, comorbid factors and age of the patient. Ultimately, loss of function sets in[4].

References

1. Rosenshein NB, Lichter AS, Walsh PC. Cervical cancer complicated by a pelvic kidney. *J Urol 1980; 123: 766-7.*
2. Bakri YN. Stage IIB carcinoma of the cervix complicated by an ectopic pelvic kidney. *Int J Gynecol Obstet 1993; 42: 174-6.*
3. Malak BB, Richard BH, Miklos LA et al. Locally advanced rectal cancer with a pelvic kidney complicating adjuvant radiation therapy. *J Surg Oncol 1996; 63: 57-60.*
4. Willett C, Tepper J, Orlow E et al. Renal complications secondary to radiation treatment to upper abdominal malignancies. *Int J Radiat Oncol Biol 1986; 12: 1601-4.*