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HEMANGIOPERICYTOMA OF THE PROSTATE A RARE CASE REPORT AND NOVEL TREATMENT STRATEGY

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INTRODUCTION

Hemangiopericytoma is a tumor arising from the pericytes or Zimmermann's cells, which are normally arranged around the capillaries and venules[1]. It is usually seen in adults and the common sites are the lower extremities and the retroperitoneum[1]. Occurrence in the genito-urinary tract is rare and literature search revealed only very few previous reports involving the prostate[2].

We herein describe a large hemangiopericytoma of the prostate that was managed in a novel way.

CASE REPORT

A 62-year-old male presented with recent onset of constipation and lower urinary tract symptoms culminating in retention of urine. Clinical examination revealed a palpable bladder which was later catheterized per urethra. Digital rectal examination (DRE) detected a large hard prostatic mass approximately 4 cm from the anal verge. Routine blood investigations and serum PSA were essentially normal. Contrast-enhanced CT scan of the abdomen and pelvis (Fig.1) revealed a 9 x 9 x 7cm heterogeneously enhancing soft tissue mass posterior and inferior to the urinary bladder that was not separately imaged from the prostate. Magnetic resonance imaging (MRI) scan (Fig. 2) confirmed a well-encapsulated heterogeneous highly vascular mass involving the prostate and infiltrating the anterior rectal wall. Fine-needle aspiration cytology from the lesion was suggestive of hemangiopericytoma.

The patient underwent exploration which revealed a large highly vascular mass in the region of the prostate adherent to the rectal wall and displacing the bladder anterosuperiorly. During surgical mobilization there was excessive blood loss from the tumor surface necessitating multiple blood transfusions. Pelvic exenteration was done and the prostatic

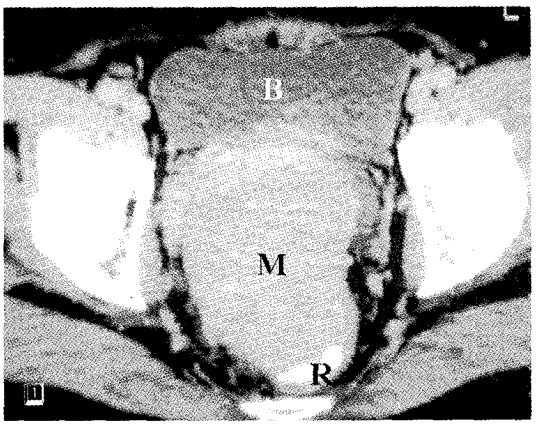

Fig. 1: CT scan showing a mass in the prostate (M) between the bladder (B) and the rectum (R)

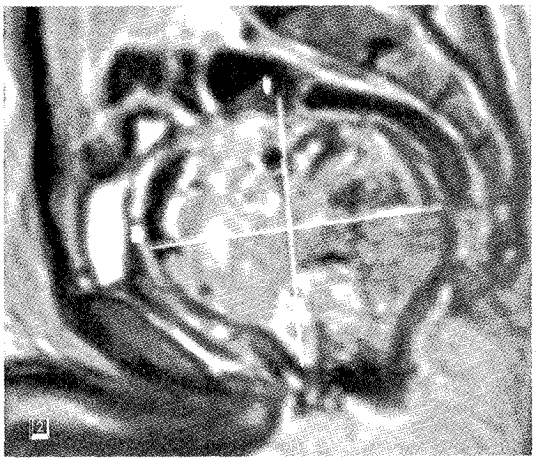

Fig. 2: Sagittal section of T1 weighted MRI scan showing a heterogeneously enhancing mass within the prostate

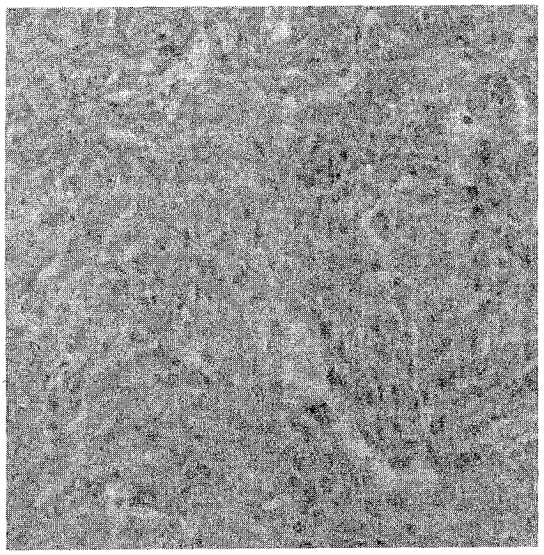

Fig. 3: Micrograph showing ovoid and spindle-shaped cells arranged around the vascular channels (H & E x 40)

tumor was removed along with the adherent rectum, bladder and seminal vesicles. Following this, urinary and fecal diversion was achieved with a single-loop sigmoid double-barrel stoma with implantation of both ureters to the loop distal to the colostomy. The patient is doing well at 36 months of follow up.

Histopathologic examination of the specimen showed a cellular tumor involving the prostate, urethra and muscularis propria of the rectum, but sparing the bladder and seminal vesicles. The tumor was composed of ovoid to spindle-shaped cells arranged in irregular lobules around a ramifying network of thin-walled vascular channels (Fig. 3). Variable mitotic activity ranging from 1 to 3 per 10 high-power fields was noted. Immunohistochemical studies showed positivity for Factor VIII-related antigen, which is suggestive of hemangiopericytoma[3].

DISCUSSION

The hemangiopericytoma is of variable malignant potential, presents as a slowly growing painless mass and is mainly a diagnosis of exclusion[3]. Wide surgical excision is the primary modality of treatment, as the tumor does not show good response to chemotherapy and radiotherapy[3].

Following any pelvic exenteration, a separate urostomy and colostomy are usually advocated. In the technique used in our case which was first described by Carter et al., a single stoma serves the purpose of urinary and fecal diversion[4]. The single stoma is less expensive, easier to maintain and the patient has a better body image. Earlier series using the same technique, as well as our experience with the described case, have shown satisfactory results with no significant electrolyte, acid-base or infective complications[5,6].

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