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Case Report

Giant prostatic hyperplasia: surgical treatment a rare case

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ABSTRACT

We report a rare case of giant prostatic hyperplasia in an 80-year-old male patient. MRI revealed a markedly enlarged prostate measuring 814gm.We have performed suprapubic open prostatectomy (Transvesical). The adenoma was completely enucleated in one piece which was 11cm×16cm in size and weighed 504gm.

Keywords: Benign prostatic enlargement, Giant prostatic hyperplasia, Suprapubic open prostatectomy (Transvesical)

INTRODUCTION

Benign prostatic hyperplasia (BPH) in males is commonly associated with the ageing process. As a man ages, the enlarged prostate usually produces progressive lower urinary tract symptoms. In some people, the prostate enlarges massively, eventually weighing more than 500 g; this is defined as giant prostatic hyperplasia (GPH).[1] Researchers have not identified to date any specific cause for this massive enlargement of the prostate.[2] Prostatic hyperplasia is considered to be due to the proliferation of epithelial and stromal cells, impairment of programmed cell death (apoptosis) or both and is endocrine controlled.[3] Prostates weighing more than 100g have been recorded in only 4% of men above the age of 70years.[4]

CASE REPORT

An 80-year-old man of medium stature, presented to our department with a long history of frequent day and night urination associated with gross hematuria since that had worsened during the previous three months. On digital rectal examination, the anal tone was found to be normal, but the prostate was very large with a rubbery consistency and no palpable hard nodules. The upper border of the prostate could not be reached.

An ultrasound scan revealed a huge prostatic enlargement (9.6cm *10.4cm *16.3cm = approx. 814cc) bulging into the bladder. Renal function tests and urine investigations were within normal range. The patient's preoperative haemoglobin level was 10.8g/dL. His prostate specific antigen (PSA) level was 4.32ng/mL. A MRI scan revealed normal kidneys but a prostate which was abnormally large in size, measuring 14cm×13cm×9cm and occupying the whole bladder (Figure 1,2).

After the detailed examination and investigations, the patient underwent a suprapubic prostatectomy. The surgical procedure revealed a massively enlarged prostate with a median lobe occupying the entire bladder, with large dilated and tortuous veins over it. The enlarged gland was enucleated completely in the classical transvesical method. The enucleation caused excessive bleeding from the prostatic bed due to the large size and increased vasularity of the gland, which was managed by blood transfusion and fluid replacement. The bladder neck was closed with a no.1 Vicryl suture after securing a 22 FR Foley's 3-way catheter via the urethra into the bladder. The bladder was closed in layers after the

insertion of a ADK no. 28 as a suprapubic Drain. Another Retropubic Drain was kept with ADK No. 32. The patient's postoperative haemoglobin was 10g/dL after giving 2 units PCV intraoperatively.

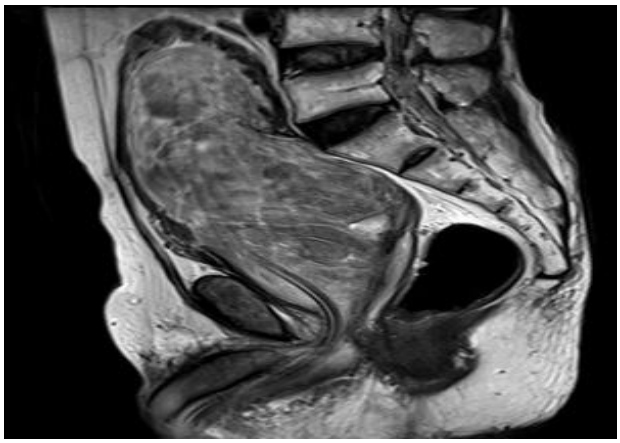

Figure 1: Showing normal urethra with enlarged prostate.

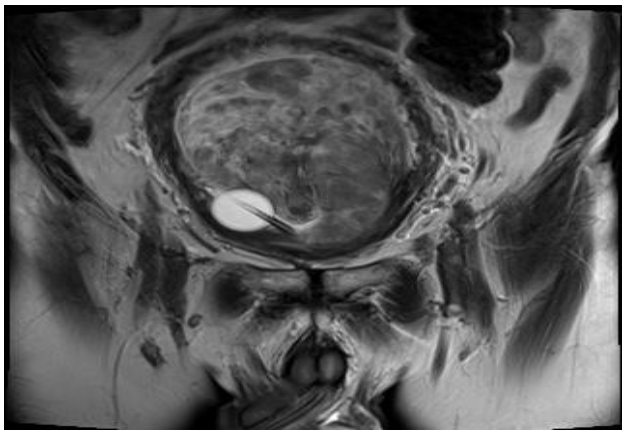

Figure 2: Showing catheter bulb with prostate covering almost bladder.

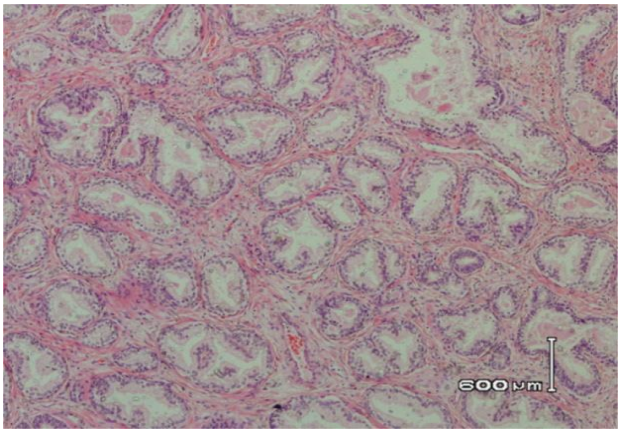

Figure 3: Showing histopathological picture of BPH.

The excised specimen was submitted for histopathological examination. The specimen measured 14cm×13cm and weighed 504g. On gross examination, there was no evidence of induration or necrosis. A microscopic examination revealed glandular and fibromuscular stromal proliferation in varying proportions (Figure 3). Findings were compatible with BPH. There was no evidence of prostatitis or carcinoma.

The urine was clear from the first postoperative day. The Retropubic Drain was removed on seventh postoperative day. The Suprapubic Drain was removed on the eleventh postoperative day. The urethral catheter was removed after 16days the patient could pass urine with a good stream and the patient was discharged the next day.

DISCUSSION

The genesis of GPH is not known; however, an exaggerated over-expression of growth factors combined with the absence or reduction of inhibitory factors have been proposed as possible mechanisms.[5] The mutation of certain proto-oncogenes such as Ras and c-erbB-2 may also be involved, developing a continuous cellular proliferation signal or the loss of influence of the p53 suppressor gene through its mutation or deletion, which would allow for abnormal cell proliferation.[6]

Transurethral surgical techniques or other minimally invasive procedures are performed for patients with small- to medium-sized prostates. However open surgery is recommended for bigger prostates. Most surgeons prefer suprapubic prostatectomy. Rapid removal of the enlarged gland with immediate effective haemostatic techniques is essential to decrease blood loss. The measures suggested to stop bleeding include applying pressure in the prostatic fossa with gauze pads; applying one or two plicating sutures to reduce both the bleeding and the prostatic fossa volume.

CONCLUSION

We considered that simple prostatectomy was the recommended treatment for men with enlarged prostate, including giant hyperplasia. In this case, as the estimated prostate volume based on MRI was 814mL, we performed retropubic open prostatectomy which was having weight of 504gm.

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Ethical approval: Not required

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