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GIANT BENIGN PROSTATIC HYPERPLASIA (GBPH): CASE REPORT FROM A TERTIARY HOSPITAL IN ELDORET, KENYA

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SUMMARY

Benign growth of the prostate is the commonest prostatic problem of the aging male, but the giant version of benign prostatic hyperplasia has been reported as a rare occurrence. It is defined as a massive prostatic hyperplasia weighing 500gm and above. Presented here is a case report of a Giant Benign Prostatic Hyperplasia of 700gm in a 93-year-old Kenyan male. While other Urologists in Kenya and the East African region might have had similar encounters with GBPH, this will be the first reported case. It will not only inform the region and beyond but might also trigger a sharing of experiences on this important topic. A review of literature and discussion on pertinent relations with this case is done.

INTRODUCTION

The prostate is a male gland that derives its name from the Greek word *Prostates* meaning the “guardian”, “protector” or “the one who stands before” by virtue of its position with relation to the urinary bladder outlet. It is an accessory male reproductive system gland found in close proximity to the urinary bladder outlet through which the prostatic urethra passes. In the lifespan of males, the prostate undergoes growth spurts at puberty, at approximately 25 and after 50 years of age (1). This growth under the influence of hormones, growth factors and inter- and extracellular interactions leads to Benign

Prostatic Hyperplasia (2) and is a common occurrence among the aging males with about 90% of those in the ninth decade showing histological evidence of BPH (3). The enlarged prostate may present with clinical features of Bladder Outlet Obstruction because of an average 0.6ml enlargement with an ensuing 0.2ml/s reduction in urinary flow annually (3). The Giant Benign Prostatic Hyperplasia (G-BPH) was described by Fishman and Merrill as a gross enlargement of the prostate of 500gm or more in weight (4) but this may be based on the historical first case report of 1908 by Freyer that weighed 500gm (5). The pathophysiology of G-BPH is uncertain but is postulated to possibly be due to disruption in normal cellular signaling, hormonal

imbalances and possible reduction in apoptosis (2). There were fewer than 40 cases of G-BPH reported in the world and less than 10 that are greater than or equal to 700gm as of the year 2014 (2). This will be the first reported case from Kenya.

CASE REPORT

A 93-year-old male (DTM) from Baringo County in the Kenyan Rift Valley presented to a private hospital in Eldoret in the company of his son. He had lived an active life and as at presentation had developed Lower Urinary Tract Symptoms (LUTS) for a year with worsening over the preceding 3 months. His main complaints were poor stream, staining on micturition, frequency, nocturia of up to 4 times and 2 episodes of retention over the 3 months, relieved by urethral catheterization. He had no preexisting co-morbidities, no past admissions or surgeries and no history of haematuria or febrile episodes.

His physical examination revealed an elderly man fully alert with good mentation, moderate body build and normal vital signs. Systemic examination was unremarkable. Digital Rectal Examination revealed a grossly enlarged prostate rubbery in consistency with freely mobile mucosa and no palpable nodules. The upper limit could not be reached, and the examining finger was free of blood.

The full haemogram, liver function tests and urea, electrolytes and creatinine were normal. Urinalysis showed no features of infection or haematuria.

The Prostate Specific Antigen done 2 weeks prior to presentation was 216ng/ml. A trans-abdominal ultrasound estimated the prostate size to be greater than 200gm.

A decision was made to do open prostatectomy. A Millin's retropubic approach was used and a grossly enlarged prostate was enucleated in total. Haemostasis was achieved by ligating directly visible bleeds in the prostatic bed as well as placing haemostatic sutures at 5 and 7 O'clock points. The capsule was closed with a F22 three-way Foley's catheter in situ for irrigation and was confirmed to be water-tight by pushing 150ml of water into the bladder using a 50cc syringe adapted to tightly fit into the catheter. The abdominal wound was closed in layers with a closed drain in the retropubic space. The estimated blood loss was about 800ml and the patient was stable at end of the procedure.

The post-operative period was uneventful with no need for blood transfusion. The bladder irrigation was done for 72 hours, the patient was allowed home on the fifth day and catheter removal was a week after surgery.

The patient had normal voiding till three years after surgery when he passed on at 96 years due to an illness unrelated to urology. Figure 1 below shows the enucleated prostate.



Figure 1: Gross appearance of the enucleated prostate



Figure 2: The weight of the enucleated prostate.

The prostate specimen was submitted for histology and was reported as Benign Prostatic Hyperplasia.

DISCUSSION

Prostate sizes vary from region to region and are thought to be influenced by race, diet and genetics. They are known to be bigger in Africans than Asians who in turn have bigger prostates than the Caucasians (6). Prostates bigger than 100gm are estimated to be in about 4% of the world population while those greater than 500gm are rarely seen (2, 7). Some authors in Asia proposed a regional re-definition of Prostatic Gigantism with a suggestion that the cut-off should be 200gm in the East (8). This particular case places Kenya and the East African region on the world map of Giant Benign Prostatic Hyperplasia (GBPH).

Prostatic Gigantism may involve the whole gland or the median lobe (9). A Giant Benign Prostatic Hyperplasia is probably the best evidence that the size of a prostate does not correspond with symptoms unless it causes an obstructive unidirectional valve-like mechanism due to an intravesical extension of the median lobe (9, 10). The 93-year-old patient presented here had lived with what was evidently a huge prostate for most of his adult life and only developed symptoms one year to the surgery that removed the 700gm prostate.

Trans-Urethral Resection of Prostate and other endoscopic or minimally invasive modes of treatment of obstructive prostate are recommended for those up to 100gm so as to avoid serious complications (11). The open prostatectomy is best done using an approach that enable ease of bleeding control and attainment of meticulous haemostasis as happens in retropubic prostatectomy.

Haemorrhage remains the greatest risk in surgery for Giant Benign Prostatic Hyperplasia with three of the 8 reported cases more than 700gm and operated on dying from bleeding (12). The Millin's retropubic approach is best suited for ease of achieving haemostasis as happened in this case report.

CONCLUSION

Urologists in Kenya and the East African region might have encountered unusually large Benign Prostates in the course of their work but have not reported them.

RECOMMENDATION

Besides the occasionally exceptional encounters, urologists in our region should be encouraged to share their experiences with the rest of the world.

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