

CASE REPORT

Benign Prostatic Hypertrophy in African Men: What Is the Impact? A Case Report and Literature Review

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Abstract

Giant benign prostatic hypertrophy (BPH), although rare, can reach weights of 200 to 500 grams or more. This case presents a 62-year-old patient, Mr. K.A., with a 503-gram prostatic adenoma causing acute urinary retention. After resuscitation and adenectomy, histological examination revealed a benign adenomyoma. Although giant BPH is infrequent, its management remains surgical, primarily through open prostatectomy. Minimally invasive techniques show advantages, but traditional surgery remains the gold standard. Postoperative follow-up is crucial to prevent complications.

1. Introduction

Benign prostatic hypertrophy, also known as prostatic adenoma, is a common condition in older individuals, resulting in an increasing volume of the prostate without signs of malignancy [1]. Its prevalence increases with age. BPH can often negatively impact the quality of life of patients and compromise both renal function and survival due to its complications [2, 3]. Large or giant prostatic adenomas are a rare anatomo-clinical entity [4, 5]. They are defined as prostate weights exceeding 200 to 500 grams [6, 7] or more. However, this massive size is not correlated with the severity of urinary symptoms [8]. There is very little data in the literature on giant prostate hypertrophy in Africa. We find it relevant to report our experience with benign prostatic hypertrophy through a case and compare it to those in the literature.

2. Case Report

Mr. K.A., a 62-year-old man, consulted the surgical emergency department of CHU COCODY for acute urinary retention caused by bladder clotting. He had presented with massive hematuria with clots five hours before his admission. His condition rapidly progressed to total inability to urinate despite the intense urge,

associated with painful hypogastric distension. He had palpitations and dizziness. Additionally, he had been followed as an outpatient for benign prostatic hypertrophy of 494 grams, complicated by recurrent acute urinary retention requiring the insertion of a permanent transurethral catheter. A high route adenectomy had been indicated but was refused by the patient. He had no significant medical history. Clinical examination revealed:

1. A moderate general impression with profuse sweating
2. Hypotension at 82/51 mmHg
3. Tachycardia at 110 beats per minute
4. Polypnea at 23 cycles per minute
5. Painful urge to urinate that he could not relieve
6. A painful bladder globe rising 2 cm below the umbilicus
7. The prostate was enlarged, smooth, firm, painless, with disappearance of the median sulcus

The rest of the clinical examination was normal. The biological tests were normal except for anemia at 7 g/dl. After transfusion resuscitation, the patient

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underwent high route surgery. Figure 1 shows the 503-gram prostatic adenoma before enucleation, highlighting the large size of the adenoma.

Figures 2 and 3 illustrate the 503-gram prostatic adenoma after enucleation, showing the removal of the excised prostatic tissue during the operation.



Figure 1. *Prostatic Adenoma of 503 g Before enucleation.*



Figure 2. *Prostatic Adenoma of 503 g After enucleation.*



Figure 3. *Prostatic Adenoma of 503 g After enucleation.*

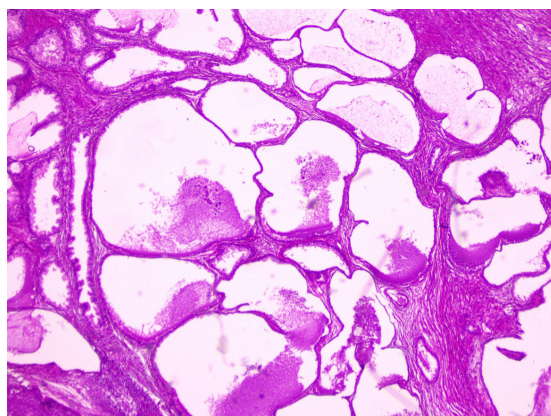


Figure 4. *histological image of benign prostatic hyperplasia.*

Histological examination revealed a benign prostatic adenomyoma with no signs of malignancy. The postoperative course was favorable. Figure 4 shows a histological image of benign prostatic hyperplasia.

3. Discussion

The prevalence of benign prostatic hypertrophy tends to decrease as the size of the adenoma increases, becoming rare when it exceeds 500 grams [9]. Only isolated cases of giant BPH have been reported in the literature [10]. In our department, we report our first case of a 503-gram prostatic adenoma. The largest prostate size ever recorded worldwide was 3,987 mL [11]. The patient presented with mild lower urinary tract symptoms and had no indication for surgical intervention. The largest benign prostatic hyperplasia ever removed weighed 2,410 grams [12, 13]. In Africa, specifically in Nigeria, a 512-gram prostatic adenoma was enucleated [10]. The natural history of prostate development shows a linear relationship between the increase in prostate volume and age, with large adenomas occurring at older ages. This is not the case with our patient, whose disease was discovered at 62 years old. Regarding the correlation between prostate volume and urinary symptoms, most authors suggest it is not significant or barely significant [10]. However, this may not apply to large adenomas. Our patient had severe prostatism and episodes of acute urinary retention. BPH is considered an endocrine phenomenon resulting from the proliferation of epithelial and stromal cells, altered programmed cell death, or both [14]. The etiology of prostate development and growth shows that prostate size increases slowly and steadily with aging. Very rarely, the prostate enlarges enormously and eventually leads to giant benign prostatic hypertrophy. Age, male hormones, inflammation, metabolic syndrome, and genetics, among others, have been systematically linked to the development of benign prostatic hyperplasia [15]. Given our patient's age, he may have had a genetic predisposition that we could not establish due to limited resources. Medical treatment is indicated for non-complicated prostatic adenomas, while surgery is necessary in the presence of complications or failure of medical treatment [16]. Open prostatectomy is traditionally the treatment of choice for managing BPH in large prostates [17]. Prostatic adenectomy was the treatment of choice for our patient. Open surgery has long been recommended for large prostates in patients in good general health who can tolerate laparotomy.

Certainly, conventional surgery remains the gold standard in giant BPH, but advances in minimally invasive techniques have started to challenge this concept with advantages such as lower bleeding and transfusion rates and shorter hospital stays [18, 19]. Postoperative monitoring must be rigorous to prevent late complications. Functional evaluation, including uroflowmetry and post-void residual measurement, is essential after surgery [20]. Pelvic floor rehabilitation can be offered in case of postoperative incontinence issues. In our case, the postoperative course was uncomplicated. It is essential to raise awareness among men about early screening for prostatic disorders, especially in resource-limited areas. The rarity of giant prostatic adenomas emphasizes the need to report each case to enrich the scientific literature.

4. Conclusion

Giant benign prostatic hypertrophy is a rare anatomical and clinical entity with symptoms similar to those of other forms. Although advances in minimally invasive surgery for treating this condition are significant, traditional surgery remains the gold standard.

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