

# Giant Benign Prostatic Hyperplasia In A Nigerian: Report Of A Case

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## Abstract

Giant benign prostatic hyperplasia (GBPH) is a rare pathology of the prostate gland. Here, we report the successful removal of the 16<sup>th</sup> heaviest prostate ever reported in the world literature. This also forms the first case report of giant prostatic hyperplasia from Nigeria. The rare GBPH case described here presented in an 87-year-old man with significant lower urinary tract obstructive symptoms, an episode of hematuria, retention and a high prostate specific antigen (PSA) value of 49ng/ml. His treatment was by open transvesical prostatectomy. The surgical specimen measured 14 x 14cm and weighed 510g. The patient's postoperative period was uneventful. Histology showed no evidence of malignancy.

## INTRODUCTION

Benign prostatic hyperplasia (BPH) often causes chronic lower urinary tract symptoms occasionally associated with complications that make many men to seek urgent medical attention. Giant benign prostatic hyperplasia (GBPH) has been defined as benign prostate hyperplasia weighing more than 500g<sup>1,2</sup>. Some authors, however, consider it as a tumor weighing more than 200g<sup>3</sup>. Giant benign prostatic hyperplasia is extremely rare: only 16 cases have been described exceeding 500g in the literature till 2010. Here, we report the 16<sup>th</sup> case of a 510g prostatic adenoma that was successfully removed through a transvesical prostatectomy approach in one piece.

## CASE REPRESENTATION AND MANAGEMENT

An 87-year old man was hospitalized because of lower urinary tract obstruction with an indwelling foley catheter for 6months. He had an episode of hematuria and retention 1 year prior to presentation which were conservatively managed. Six months later, he developed another retention. Digital rectal examination revealed a huge prostate with benign features. The margins were difficult to delineate. The total PSA level was 49ng/ml. The prostatic volume could not be measured at transrectal ultrasound. The routine laboratory findings were normal. Suprapubic transvesical prostatectomy under spinal anaesthesia was performed and the large adenoma was enucleated completely in one piece according to standard procedures. A 3-way size 20 foley's catheter was inserted and a malamet stitch was applied using prolene 1

with the balloon placed in the urinary bladder. This stitch was removed after 36 hours. Blood loss was 250ml and there were no operative or post-operative complications. The removed specimen was measured to be 14 x 14 cm in diameter and weighed 510g (Fig 1a and b). Pathologic examination revealed the proliferation of prostatic glands with no evidence of malignancy. The foley catheter was removed on the 4<sup>th</sup> day, and the patient was able to void without difficulty. He was discharged from hospital on the 5<sup>th</sup> post-operative day. At 2 month's follow-up, the patient was voiding satisfactorily and was continent.

## DISCUSSION

Benign prostatic hyperplasia (BPH) is a common urologic condition experienced by aging men resulting in bothersome lower urinary tract symptoms. Most often acute urinary retention occurs and occasionally, hematuria. Giant benign prostatic hyperplasia is defined as a prostate weighing more than 500g<sup>1,2</sup> even though some authors use 200g<sup>3</sup>. From the Japanese literature, 33 cases of prostate enlargement that have weighed more than 200g have been reported<sup>6</sup>. The genesis of GBPH is unknown. It is thought, however, that an exaggerated over-expression of growth factors in addition to the absence or reduction of inhibitory factors that break the balance may form the underlying basis<sup>2</sup>. GBPH is an extremely rare entity. The first reported case was in 1908 by Freyer who removed an adenoma that weighed more than 500g. Up to 2010 there have been 16 reported cases of GBPH (Table 1) weighing more than 500g<sup>1,4-18</sup> the largest of

which weighed 2410g<sup>5</sup>. In 2010, only one case was reported<sup>2</sup>.

Transurethral resection of the prostate (TURP) forms the current approach for the treatment of symptomatic BPH that has failed conservative therapy. Although there are newer minimally invasive techniques which form alternatives to TURP for small-sized prostates, the only main approach for large prostates (greater than 75g) is the time-tested open prostatectomy. Transvesical prostatectomy is the enucleation of the enlarged prostatic adenoma through an extraperitoneal incision of the lower anterior bladder wall. This operation is ideal for patients with a large median lobe with an associated symptomatic bladder diverticulum or a large bladder stone<sup>3, 17</sup>.

To the best of our knowledge, 16 cases of giant benign prostatic hyperplasia have been described exceeding 500g to date and our case is the 16<sup>th</sup> heaviest ever reported in the literature (Table 1). The surgical approach earlier recommended for removing giant prostates is an open prostatectomy. In this patient, a transvesical open prostatectomy was performed and the prostatic adenoma was removed in one piece successfully. Giant benign prostatic hyperplasia is a very rare condition and open surgery techniques still appear to be the safest methods for treatment.

**Figure 1**

Figure 1: The removed prostatic tissue was measured to be 14 x 14 cm in diameter



**Figure 2**

Figure 2: The removed prostatic tissue weighed 510g and measured 14x14cm.



**Figure 3**

Table 1 Giant prostates that have been described exceeding 500g in the literature

Author	Year	Prostate Size
Medina Perez et al [5]	1997	2410
Ockerblad [6]	1946	820
Nelson [7]	1940	720
Gilbert [8]	1939	713
Wadstein [9]	1938	705
Lantzius-Beninga [10]	1966	705
Ashamalla and Ahmed [11]	1972	695
Thomson-Walker [12]	1920	680
Yilmaz et al. [1]	2004	610
Bacon [13]	1949	602
De Silva-Gutiérrez et al. [2]	2010	600
Middleton [14]	1937	557
Kitagawa et al. [15]	1980	535
Fishman and Merrill [16]	1993	526
Sood et al. [17]	2006	522
Akpo and Akpo	2010	510
Hosseini and Safarinejad [18]	2004	508

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