OPEN ACCESS Freely available online

Medical & Surgical Urology

Case Report

Benign Prostatic Hyperplasia in 69 Years Old Man with Highest Serum PSA Level >3500 ng/mL

Fouad Kolawalé Yde Soumanou[1]*, Josué Dédjinin Georges Avakoudjo[2], Dètondji Fred Hodonou[3], Khadidjatou Ouaké[4]

[1]Department of Urology, University Hospital of CNHU-HKM (Clinical and etiological aspects of sciatica in Hubert Koutoukou Maga Teaching Hospital), Cotonou, Benin; [2]Surgery Department, University Hospital of CHU S/L, Cotonou, Benin; [3]Department Urology, University Hospital of CNHU-HKM, Cotonou, Benin; [4]Surgery Department, Hospital De Zone Suru Lere, Cotonou, Benin

ABSTRACT

Objective: To describe a case of 69 years old man who had Benign Prostatic Hyperplasia (BPH) with highest serum Prostate Specific Antigen (PSA) (>3500 ng/mL).

Materials and Methods: This is a case report of elevated PSA in 69 years old man with BPH.

Results: We were reported a 69 years-old man who was admitted for low urinary tract symptoms. In medical history, we were found PCa (Prostate Cancer) case in his family. Digital Rectal Examination (DRE) found soft, enlarged, smooth prostate. Serum PSA level was highest (>3500 ng/mL). Computed tomography chest-abdominal-pelvic revealed: integrity of prostate capsule and bladder decompensation; neither iliac-inguinal lymph nodes nor bones damage were not found. Transrectal ultrasound prostate biopsy realized. Anatomopathological screening prostate biopsy was negative. Anatomopathological screening of prostatectomy piece confirmed BPH. Serum PSA test done two weeks later. The result was 0.48 ng/mL.

Conclusion: Serum PSA test can misleading. Elevated serum PSA can be associated with BPH.

Keywords: PSA; Prostate cancer; Benign prostatic hyperplasia

INTRODUCTION

Older men usually have a shorter life expectancy, a higher risk of competing causes of mortality, and a greater risk of potential harm from screening for prostate cancer (PCa) [1]. It is evident that there is an increasing proportion of individuals aged 70 years and older, as well as an increasing life expectancy worldwide [2]. Although use of the Prostate Specific Antigen (PSA) as a diagnostic marker has improved the detection of PCa, its low sensitivity and specificity for PCa makes early finding of PCa difficult. PSA level is frequently increase in Benign Prostatic Hyperplasia (BPH) [3].

We described a case report of elevated serum PSA in 69 years old man with BPH.

CLINICAL CASE

A 69-years-old man was admitted for difficult voiding, marcroscopic haematuria and irritative voiding symptoms. The symptoms were started since 5 years. International Score of Prostatic Symptom (IPSS) was 25 (severe symptom). Medical prescription was alpha-blocker. He had hypertension and diabetes in past history. His father died of prostate cancer. General state was satisfactory. Digital rectal examination found soft, smooth, enlarged and painless prostate. Serum PSA test was done in three various hospital and level was >3500 ng/mL. Sonogram found prostate of 152 g of weight, middle lobe enlargement and bladder decompensation.

Computed tomography chest-abdominal-pelvic revealed: integrity of prostate capsule and bladder decompensation; neither iguinal-iliac lymph nodes nor bones damage were not found; prostate

***Correspondence to**: Fouad Kolawalé Yde Soumanou, Department Head of Urology, University Hospital of CNHU-HKM, Cotonou, Benin, Tel: 00229 96880788; E-mail: soumfou@yahoo.fr

Recieved: March 19, 2019, **Accepted:** April 2, 2019, **Published**: April 9, 2019

Citation: Soumanou FKY, Avakoudjo JDG, Hodonou DF, Ouake K (2019) Benign Prostatic Hyperplasia in 69 Years Old Man with Highest Serum PSA Level >3500 ng/mL. Med Sur Urol 8:219. doi: 10.24105/2168-9857.8.219

volume was 140 g. Transrectal ultrasound prostate biopsy done. Anatomopathological screening of prostate biopsy was negative.

Urine culture identified enterocoque bacterium sensible to these antibiotics groups: Aminoglycoside and ß-lactamine.

Prostatectomy was successfull realized. Prostate weight was 120 g. Postoperative aftercare were simple. Anatomopathological screening of prostatectomy piece confirmed benign prostatic hyperplasia. Serum PSA test done two weeks later. The result was 0.48 ng/mL. IPSS was 3.

DISCUSSION

Serum Prostate-Specific Antigen (PSA) is one of the most influential and controversial biomarkers in oncology. Although using PSA for screening and the early detection of prostate cancer (PCa) is hotly debated, using PSA is not as controversial in patients with a known diagnosis of PCa. We would argue that an overreliance on PSA in a patient with a known diagnosis of PCa can lead to suboptimal care through unnecessary and potentially harmful treatments and early discontinuation of potentially helpful treatments [4]. PSA is one of several factors (PSA kinetics, American Joint Committee on Cancer staging, Gleason score, and patient characteristics) used to guide staging and treatment decisions for men with newly diagnosed disease [5]. Despite these valuable contributions of the PSA test after a PCa diagnosis, PSA has significant limitations that often are not discussed [6].

Second-generation PSA tests have better diagnostic accuracy for high-grade disease than earlier tests. Two such tests, the Prostate Health Index (Beckman Coulter) and the 4Kscore (Opko Health), are commercially available though not usually covered by commercial insurers. A third test, IsoPSA (Clevel and Diagnostics), is under development [7].

A PSA Volatility Index (PVI) was used to assess PSA variability over time. A high PVI derived from a highly variable PSA with a flat or negative PSA slope and predicted for BPH. In contrast, a low PVI predicted for PCa and derived from PSAs which trended upward with little variation around the regression. PVI is a useful method to assess for prostate cancer risk in men with highly variable PSAs over >6 months study time [8].

There is, therefore, an urgent need for novel biomarkers that can effectively distinguish PCa from BPH. PSA, and PDW (Platelet Distribution Width) are markedly higher and MPV (Mean Platelet Volume) is significantly reduced in PCa patients than in BPH patients [3]. In addition, PSA, MPV, and PDW in combination significantly enhance the ability to distinguish PCa from BPH. Recent studies confirmed that low levels of MPV are associated with high-grade inflammatory diseases and reverse in the course of anti-inflammatory therapy [9]. Aksoy et al. [10] observed that solid tumors with bone marrow metastasis were more likely to have low MPV levels. On the other hand, high PSA levels are frequently detected in BPH patients [11]. Therefore, identification of new biomarkers to correctly identify PCa patients would help to prevent individuals with BPH from getting unnecessary biopsies and from the side effects of overtreatment [3].

CONCLUSION

Serum PSA test can misleading. Anatomopathological screening of prostate biopsy was negative. Anatomopathological of prostatectomy piece confirmed BPH. Elevated serum PSA can be associated with BPH.

CONFLICT OF INTEREST

None

SOURCE OF FUNDING

None

REFERENCES

1. Daskivich TJ, Fan KH, Koyama T, Albertsen PC, Goodman M, Hamilton AS, et al. Original research effect of age, tumor risk and comorbidity on competing risks. Ann Intern Med. 2013;158:709717.
2. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2015. CA Cancer J Clin. 2015;65:529.
3. Shuang Fu, Xin Zhang, Ye Niu. Prostate Specific Antigen, Mean Platelet Volume, and Platelet Distribution Width in Combination to Discriminate Prostate Cancer from Benign Prostate Hyperplasia. Asian Pac J Cancer Prev. 2018;19:699-702.
4. Hayes JH, Barry MJ. Screening for prostate cancer with the prostate specific antigen test: a review of current evidence. JAMA. 2014;311:1143-1149.
5. Thompson I, Thrasher JB, Aus G, Burnett AL, Canby-Hagino ED, Cookson MS, et al. AUA Prostate Cancer Clinical Guideline Update Panel. Guideline for the management of clinically localized prostate cancer: 2007 update. J Urol. 2007;177:2106-2131.
6. Megan Caram EV, Skolarus TE, Cooney KA. Limitations of Prostate-specific Antigen Testing After a Prostate Cancer Diagnosis. Eur Urol. 2016;70:209-210.
7. Klein E. PSA screening: Back to the future. Clev Clin J Med. 2018;85:881-883.
8. Phillips JL, Choudhury MS. Prostate specific antigen volatility index (pvi) discriminates men with prostate cancer from those with biopsy-proven benign prostatic hyperplasia (bph). J Urol. 2008;179:573.
9. Gasparyan AY, Ayvazyan L, Mikhailidis DP, Kitas GD. Mean platelet volume: a link between thrombosis and inflammation. Curr Pharm Des. 2011;17:47-58.
10. Aksoy S, Kilickap S, Hayran M. Platelet size has diagnostic predictive value for bone marrow metastasis in patients with solid tumors. Int J Lab Hematol. 2008;30:214-219.
11. Thompson IM, Pauler DK, Goodman PJ, Tangen CM, Lucia MS, Parnes HL, et al. Prevalence of prostate cancer among men with a prostate-specific antigen level <or =4.0ng per milliliter. N Engl J Med. 2004;350:2239-2246.