J Surg Med. 2018;2(3):344-346.
DOI: 10.28982/josam.410144

Case report
Olgu sunumu

Journal of Surgery and Medicine

e-ISSN: 2602-2079

Rare and challenging two complications after prostate biopsy of an older man

Yaşlı bir erkekte prostat biyopsisi sonrası gelişen zor ve nadir iki komplikasyon

Tuğba Turgut [1], Deniz Mut Sürmeli [1], Remzi Bahşi [1], Hande Selvi Öztorun [1], Murat Varlı [1], Sevgi Aras [1]

[1] Department of Geriatrics, Faculty of Medicine, Ankara University, Ankara, Turkey

ORCID ID of the authors
TT: 0000-0001-6479-8857
DMS: 0000-0002-3913-1046
RB: 0000-0003-1715-6856
HSÖ: 0000-0003-0343-8510
MV: 0000-0003-0144-9646
SA: 0000-0002-5356-303X

Corresponding author / Sorumlu yazar:
Tuğba Turgut
Address / Adres: Hacettepe, Talatpaşa Bulvarı, No:82, 06230, Altındağ, Ankara, Türkiye
Tel: +90312 5083333
e-Mail: drtugbaonacan@hotmail.com

Informed Consent: The author stated that the written consent was obtained from the patient presented in the study.
Hasta Onamı: Yazar çalışmada sunulan hastadan yazılı onam alındığını ifade etmiştir.

Conflict of Interest: No conflict of interest was declared by the authors.
Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Financial Disclosure: The authors declared that this study has received no financial support.
Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

Received / Geliş tarihi: 28.03.2018
Accepted / Kabul tarihi: 24.04.2018
Published / Yayın tarihi: 24.04.2018

Abstract

Although prostate cancer is the second most common cancer type in men, its mortality rate is lower. Despite European Randomized Study of Screening for Prostate Cancer study reported that screening with prostate-specific antigen made a substantial reduction in prostate cancer mortality at 13 years of follow-up; they do not recommend population screening with prostate specific antigen because of the uncertain balance between benefits and harms. In our case, prostate biopsy was performed because of urinary symptoms but two severe operation planned due to infective endocarditis and spondylitis, a long and serious antibiotherapy process and its side effects were occurred after prostate biopsy. In light of this case, clinicians should consider that prostate biopsy may cause serious complications when they are screening asymptomatic men for prostate cancer or deciding whether or not to have a prostate biopsy.

Keywords: Older patient, Prostate cancer, Infective endocarditis

Öz

Prostat kanseri erkeklerde ikinci sıklıkta görülen kanser tipi olmasına rağmen mortalite hızı düşüktür. Avrupa Randomize Prostat Kanser Tarama çalışmasında; prostat spesifik antijen ile taramada 13 yıllık takipte mortalitede belirgin düşüş sağlanmasına rağmen fayda ve zararları arasındaki belirsiz denge nedeniyle prostat spesifik antijen ile genel toplum taraması önerilmemiştir. Vakamızda; üriner semptomlar nedeniyle prostat biyopsisi yapıldıktan sonra enfektif endokardit ve spondilodiskit gelişti ve bu komplikasyonlara yönelik iki ciddi operasyon planlandı, uzun ve ciddi bir antibiyoterapi süreci ile antibiyoterapiye bağlı yan etkiler ortaya çıktı. Bu vaka ışığında, klinisyenlerin asemptomatik erkeklerde tarama yaparken veya prostat biyopsisi kararı verirken bu komplikasyonları göz önünde bulundurmaları önerilir.

Anahtar kelimeler: Yaşlı hasta, Prostat kanseri, İnfektif endokardit

Introduction

Although prostate cancer is the second most common cancer type in men, its mortality rate is lower [1]. Despite European Randomized Study of Screening for Prostate Cancer study reported that screening with prostate-specific antigen (PSA) made a substantial reduction in prostate cancer mortality at 13years of follow; they do not recommend population screening with PSA because of the uncertain balance between benefits and harms [2]. The European Association of Urology guidelines recommend PSA-based screening for men aged between 55 and 69, although PSA testing may result in over diagnosis and overtreatment of prostate cancer particularly in men under 50 and over 69 years. In addition, routine PSA screening is not recommended for males older than 70 years and whose life expectancy is less than 10-15 years [3]. We wanted to show that even some simple diagnostic procedures can leave the clinician in a difficult situation due to the age and comorbidities of patient.

How to cite / Atıf için: Turgut T, Sürmeli DM, Bahşi R, Öztorun HS, Varlı M, Aras S. Rare and challenging two complications after prostate biopsy of an older man. J Surg Med. 2018;2(3):344-346.

Case presentation

77-year-old male patient with history of hypertension, mitral valve prolapse and benign prostate hypertrophy was admitted to geriatric outpatient clinic with complaints of fatigue, loss of appetite, pollakiuria, nocturia and urinary incontinence. His physical examination was normal except mild rhonchi and 2/6 cardiac murmurs on mitral focus. We investigated PSA and urine culture because of urinary complaints. PSA value was 16.01 ng/mL and urine culture was positive for Enterococcus faecalis. Oral levofloxacin was started according to antibiogram.

He was referred to urology department because of sudden acute urinary retention and urinary catheter was applied to the patient when he was on antibiotherapy. In rectal examination, his prostate was found stiff and prostate biopsy was performed. Pathological examination of the biopsy specimen revealed adenocarcinoma of the prostate.

One month after prostate biopsy, he admitted to our clinic with complaints of fatigue, severe back pain, fever and night sweats. Transthoracic echocardiography (ECO) was performed because of fever and murmurs and revealed slightly thicker aortic valves prolapse with proliferation of tissue in mitral anterior leaflet and moderate to severe mitral insufficiency. Second echocardiography was performed because of Enterococcus faecalis growth in 4 consecutive blood cultures and 1 urine culture in fever periods and found similar with the previous one. Brucella agglutination test, tuberculin skin test and bone scintigraphy were negative which were done for fever and back pain. Oral levofloxacin treatment was completed to 14 days and patient was discharged from hospital.

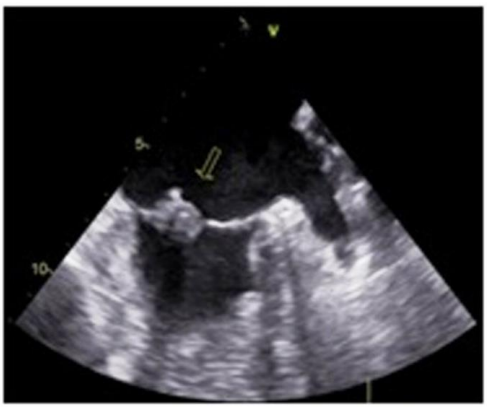

Figure 1: Vegetation on mitral valve

Figure 2: Spondylitis and paravertebral abscess on L3 vertebra

Patient was re-admitted to hospital due to fever, severe back pain and abdominal pain two months later. Enterococcus faecalis was isolated from his blood culture and intravenous ampicillin treatment was started. Thoracic and abdominal computerized tomography revealed an abscess primarily in the anterior paravertebral region and the right psoas muscle and spondylodiscitis at L3-4 level (Figure 1). Patient was consulted to the neurosurgery department and operation was planned. An echocardiography was performed for preoperative evaluation and seen vegetation of 1.4x0.9 cm in diameter on the mitral valve (Figure 2). Spondylodiscitis operation was delayed and intravenous gentamicin was added to ampicillin treatment for infective endocarditis.

Because of acute renal failure, gentamicin was changed with ceftriaxone and then azotemia regressed. After 6 weeks of antibiotherapy, mitral valve replacement operation was recommended but the patient did not accept. Control echocardiography 3 months after discharge revealed 1.2x0.8 cm diameter calcified vegetation on the mitral valve.

Discussion

European Society of Medical Oncology guideline for prostate cancer does not recommend population-based PSA screening because of risk of over-diagnosis and overtreatment, though reducing prostate cancer mortality [4]. The guideline recommends deciding whether or not to perform prostate biopsy in the light of digital rectal examination findings, ethnicity, age, comorbidities, PSA values and history of previous biopsy [4]. For our patient, prostate biopsy was necessary because of having common urinary tract symptoms, suspicious digital rectal examination and elevated PSA.

Infective endocarditis is a serious disease associated with significant morbidity and mortality. American College of Cardiology/ American Heart Association (ACC/AHA) recommended prophylaxis for mitral valve prolapse (MVP) with regurgitation and/or valve thickening in endocarditis prophylaxis recommendations in 2006 [5]; but the updated guide does not include this recommendation. Also new guideline recommends that eradication with antibiotics before the procedure will be a rational approach if there is enterococcal urinary infection or colonization in high-risk patients who will undergo elective cystoscopy or other urinary maneuvers [6]. Likewise, the European Society of Cardiology guidelines for the management of infective endocarditis, published in 2015, recommended prophylaxis against enterococci (ampicillin, amoxicillin, or vancomycin) to protect against wound infection or septicemia due to genitourinary maneuver in high-risk patients. The high-risk patients described as; patients with prosthetic valves, those with previous infective endocarditis, and those with congenital heart disease [7].

Because of the patient did not accept any operational procedure, we could not collect diagnostic samples anymore. However, as same pathogen growth in blood culture samples which were taken after prostate biopsy and in urine culture taken during prostate biopsy; it is believed that the source of abscess, vegetation and spondylodiscitis were also the same pathogen.

In our case, prostate biopsy was performed within the indications but two severe operations were planned, a long and

serious antibiotherapy process and its related side effects were occurred because of prostate biopsy. In a study of Hiyama et al. [8], they reported a 59-year-old patient who underwent prostate biopsy because of high PSA values found in checkup without any symptoms. Aortic valve replacement was performed due to acute heart failure because of infective endocarditis and in this patient there was vegetation in echocardiography and positive blood cultures in which Enterococcus faecalis was responsible.

As far as we know, our case is second in which these two important complications were seen together after prostate biopsy. In light of these two cases, clinicians should consider that prostate biopsy may cause serious complications when they are screening asymptomatic men for prostate cancer or deciding whether or not to have a prostate biopsy.

References

1. Center MM, Jemal A, Lortet-Tieulent J, Ward E, Ferlay J, Brawley O, et al. International variation in prostate cancer incidence and mortality rates. European Urology. 2012;61(6):1079-92.
2. Schroder FH, Hugosson J, Roobol MJ, Tammela TL, Zappa M, Nelen V, et al. Screening and prostate cancer mortality: results of the European Randomised Study of Screening for Prostate Cancer (ERSPC) at 13 years of follow-up. Lancet. 2014;384(9959):2027-35. doi: 10.1016/S0140-6736(14)60525-0. PMID: 25108889; PMCID: PMC4427906.
3. Carter HB, Albertsen PC, Barry MJ, Etzioni R, Freedland SJ, Greene KL, et al. Early detection of prostate cancer: AUA Guideline. The Journal of Urology. 2013;190(2):419-26.
4. Parker C, Gillessen S, Heidenreich A, Horwich A. Cancer of the prostate: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Annals of Oncology. 2015;26(suppl 5):v69-v77.
5. Bonow RO, Carabello BA, Chatterjee K, de Leon AC, Faxon DP, Freed MD, et al. ACC/AHA 2006 guidelines for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (writing Committee to Revise the 1998 guidelines for the management of patients with valvular heart disease) developed in collaboration with the Society of Cardiovascular Anesthesiologists endorsed by the Society for Cardiovascular Angiography and Interventions and the Society of Thoracic Surgeons. Journal of the American College of Cardiology. 2006;48(3):e1-e148.
6. Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 Focused Update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines: developed in collaboration With the Canadian Cardiovascular Society endorsed by the American Academy of Family Physicians: 2007 Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction, Writing on Behalf of the 2004 Writing Committee. Circulation. 2008;117(2):296-329. doi: 10.1161/CIRCULATIONAHA.107.188209. PMID: 18071078.
7. Habib G, Lancellotti P, Antunes MJ, Bongiorni MG, Casalta J-P, Del Zotti F, et al. 2015 ESC Guidelines for the management of infective endocarditis. European Heart Journal. 2015:ehv319.
8. Hiyama Y, Takahashi S, Uehara T, Ichihara K, Hashimoto J, Masumori N. A case of infective endocarditis and pyogenic spondylitis after transrectal ultrasound guided prostate biopsy. J Infect Chemother. 2016;22(11):767-9. Epub 2016/10/26. doi: 10.1016/j.jiac.2016.05.002. PMID: 27374863.