Olgu sunumu

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Transrektal Ultrason Eşliğinde Prostat Biyopsisi ile Tanı Konulan Prostat Malakoplakisi

Malakoplakia of Prostate Which Diagnosed by Transrectal Ultrasound Guided Biopsy of the Prostate

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Öz

Malakoplaki genitoüriner sistemin nadir görülen kronik inflamatuar bir hastalığıdır. Prostat malakoplaki prostatit ve akut üriner sistem obstrüksiyonu ile prezente olabilir. Malakoplaki enfeksiyon nedeniyle yüksek prostat spesifik antijen (PSA) değerlerine neden olabilir ve transrektal ultrasonda hipoekoik görüntü vererek prostat kanserinden ayırt edilemez. Sıklıkla malignite olarak yanlış tanı alır ve histopatolojik inceleme kesin tanı için gereklidir. Bu olgu sunumunda, biz prostatizm ve yüksek PSA düzeyleri ile hastanemize başvuran hastayı sunuyoruz. Birincil klinik düşünce prostat malignitesi olmasına rağmen, bu olguda histopatolojik incelemede malakoplaki tanısı konuldu.

Anahtar Kelimeler: Malakoplaki, prostat biyopsisi, prostat kanseri

Abstract

Malakoplakia is a rare chronic inflammatory disease of genitourinary system. Malakoplakia of prostate may be present with prostatitis and acute urinary tract obstruction. Malakoplakia due to infection may cause high prostate specific antigen (PSA) values and gives hypoechoic image in transrectal ultrasound which is indistinguishable from prostate cancer. It is frequently misdiagnosed as a malign condition and histopathological examination is required for a definitive diagnosis. In this case report, we present a patient who presented to our hospital with prostatism symptoms and high PSA levels. Although primary clinical consideration was as prostate malignancy, this case was diagnosed as malakoplakia after histopathologic examination.

Keywords: Malakoplakia, prostate biopsy, prostate cancer

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Introduction

Malakoplakia is a rare chronic inflammatory disease. It was first described in 1902 by Michaelis and Gutmann. Von Hansemann has derived the word malakoplakia from the Greek adjective malakos (soft) and plaka (plaque) (1,2). Malakoplakia, which typically involves the urinary tract (most commonly bladder and prostate, kidney, ureter, female genital tract and retroperitoneal tissue) and symptoms may appear as organ specific (3). However, it has been reported in colon, stomach, lung, liver, bone, uterus and skin (4). Malakoplakia of prostate was first described in 1959 by Carruthers. Malakoplakia of prostate is an extremely rare clinic condition and may mimic prostate cancer and the definite diagnosis of malakoplakia depends on the histopathological verification with prostate biopsy (5). In this case report, we present a case with prostatic malakoplakia which was diagnosed transrectal ultrasonography(TRUS) guided prostate biopsy

Case Report

A 59-year-old man admitted to our clinic with prostatism symptoms and difficulty of initiating urination that was lasting for 1 month. He suffered from dysuria, hesitancy and urgency. When assessing the history of patient there was no associated fever, purulent urethral discharge, weight loss, exposure to radiation or family history of similar illness. He was diagnosed with benign prostatic hyperplasia. Digital rectal examination revealed a prostate gland with an estimated size between 60-100 cm3 without any nodules. Laboratory test results revealed his Serum prostate spesific antigen (PSA) level of the patient was 93ng/mL, and the controlled level was 53 ng/mL (normal 0-4ng/mL). Urinalysis revealed 7 to 9 lekocytes per high power field. Urinary ultrasonography showed an 70.7 cc enlarged prostate gland. In TRUS of prostate, there were hypoechoic areas in the peripheral zones. According to high PSA levels, he underwent a TRUS-guided prostate biopsy. The prostate needle biopsies with 10 cores were obtained using a transrectal approach. Specimens were sent for histopathologic deparment for examination. Histopatological examination revealed lamina propria of prostate with a diffuse infiltration of eosinofilic hysiocities (Von Hansemann), plasma cells and mixed inflammatory cells including lymphocytes within fibromuculer stroma of prostate positive for hematoxylin and eosin stain and CD68 immunoperoxidase stain (Fig. 1,2). Several histiocytes including basophilic inclusions (Michaelis–Gutmann bodies) of varied size, which positively with periodic acid schiff (PAS) (Fig. 3a,3b). All biopsy specimens demonstrated chronic granulomatous prostatitis (malakoplakia). The urine culture revaled Escherichia coli (extended-spectrum B-lactamase producing Escherichia coli growth). This organism was sensitive to ciprofloxacin and ceftriaxone. Oral Ciprofloxacin antibiotherapy was given for 2 week duration and the control culture was negative. During routine clinical follow-ups, serum PSA was 3.2 ng/mL.

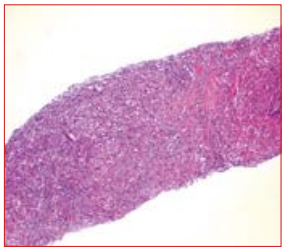

Figure 1: Hematoxylin and eosin, original magnification ×100 Diffuse inflammation composed of macrophages, lymphocytes and plasma cel*ls*.

Figure 2: CD68 x40 The inflammatory response was CD68+

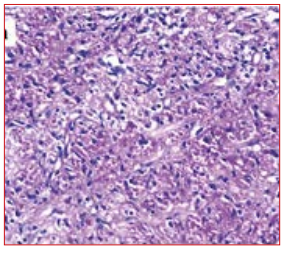

Figure 3a: Periodic Acid Schiff (PAS) x400 Michaelis-Gutmann bodies

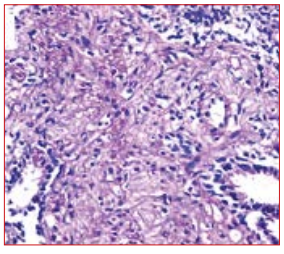

Figure 3b: Periodic Acid Schiff (PAS) x400 Michaelis-Gutmann bodies In histopath*o*

Discussion

The pathogenesis and etiology of malakoplakia is still unknown, but several theories are popular. The most commonly accepted theory is gram-negative bacterial infections. Malakoplakia results from chronic urinary tract infection and 80-90% of urine culture positivity is available. Escherichia coli and klebsiella are frequently isolated from the urine (5-7). Other etiologic factors are organ transplantation, tuberculosis, sarcoidosis, allergic conditions, cytotoxic chemotherapy, acquired immunodeficiency syndrome, malignancies, steroid use, alcohol abuse, poorly controlled diabetes, ulcerative colitis, and malnutrition (7). It is more common in females, with a female to male ratio of 4:1 and the average age is 50 years (8). There are 27 cases of prostatic malacoplakia in the Turkish literature and less than fifty cases in the world litetarure. The clinical diagnosis of malakoplakia based on biopsy. Clinical manifestations of prostatic malakoplakia are low urinary tract symptoms (LUTS), prostatism symptoms, acute urinary obstruction but mostly there are not characteristic symptoms or signs in prostate. In our case, LUTS were present and there were no chronic disease or immunosuppression.

logical examination demonstrated; submucosal microscopic infiltration consists of in early period, mucosal ulceration as well as histiocytes, lymphocytes and plasma cells containing characteristic intracytoplasmic inclusion bodies called Michaelis-Gutmann bodies that are diffusely infiltrating the connective tissue in late period (7-9). In 1965, Smith described the three histological type of malakoplakia. There are a small number of macrophages and plasma cells in the early phase. Classical phase or granulomatous phase consists of histiocytes, lymphocytes and plasma cells containing Michaelis Gutmann bodies. In Fibrosis phase or recovery phase of histiocytes and a small number of Michaelis Gutmann bodies are available between collagen tapes and fibrotic tissues. In the literature, Michaelis Gutmann bodies can't be seen in early or late phase, therefore Michaelis Gutmann bodies are not accepted as a mandatory parameter for the diagnosis malakoplakia. Characteristic Von Hanselman cells and pathognomonic Michealis Gutman body appearance is not mandatory for definitive diagnosis (8,9).

Michaelis-Gutmann bodies are signs of abnormal of the intraphagosomal digestion of macrophages. This is due to mineralization intracytoplasmic bodies of electron microscopic examination of macrofagolisosom. Electron microscopic studies have showed that undigested bacterial remnants inside macrophages. Michaelis-Gutmann bodies were found to contain calcium hydroxyapatite and iron. This is because of its contains minerals, PAS, Prussian Blue, and von Kossa dyes are used for histochemical investigations(8,9).

Malakoplakia of prostate mimics prostate cancer. Digital rectal examination, laboratory and radiological symptoms are nearly the same in the clinic situation. Definitive diagnosis requires histopathological examination. It is often misdiagnosed as a malignant condition.
Surgical treatment options is transurethral resection (TUR) for malakoplakia of bladder and transurethral resection (TUR) or open prostatectomy for malakoplakia of prostate but for malakoplakia, medical treatment is usually sufficient. Medical treatment is effective, especially into the cell in the fagolisosoma mechanism to help antibiotics should be chosen (10). Our case has responded to 2-week oral antibiotherapy. Recurrence was observed during follow-up.

Conclusion

Malakoplakia of prostate mimics prostate cancerwith chronic granulomatous disease is rare, as it mimics the clinical prostate cancer. Prostate biopsy result in malakoplakia in patients, clinical symptoms are decreased with appropriate antibiotic therapy, urine culture be sterile and PSA comes to normal. However malakoplakia determined and height of the PSA continued in the patients should be noted that to be detected prostate cancer and should be made routine PSA follow-up.

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