Localized Secondary Amyloidosis of the Prostate

Prostatın Lokalize Sekonder Amiloidozu

Nebil Bal, Nazım Emrah Koçer

Başkent University Faculty of Medicine, Adana Research and Practise Center, Clinic of Pathology, Adana, Turkey

Introduction

Amyloidosis is an that is characterized the deposition of an abnormal proteinaceous material in extracellular tissue. Amyloidosis may be localized or systemic. Only about 6-9% all cases of amyloidosis are localized to a single organ system, and prostate is one of the rarest sites of involvement. Herein we report a localized secondary amylodosis of the prostate in a 73-year-old man.

Amyloidosis is characterized by deposition of an abnormal proteinaceous material in extracellular tissue. It's etiology is uncertain (1). Amyloidosis of the prostate is very rare. In recent years, with the increase in the number of prostate biopsies to exclude the malignancy, the number of the primary or secondary amyloidosis cases increased (2). Deposition of the amyloid can be localized or systemic (3). Herein we report a localized secondary amylodosis of the prostate in a 73-year-old man who underwent to transrectal ultrasound (TRUS) guided biopsy of prostate for suspected prostate cancer.

Case Presentation

A 73- year-old man was admitted to the urology outpatient clinic with complaints of dysuria. PSA level was 8.59 ng/ml and the prostate was unremarkable in digital rectal examination. TRUS guided biopsy was performed. Microscopic examination was revealed mild bengin adenomatous hyperplasia and deposition of proteinaceous amorph material in extracellular matrix of the prostate in all cores, but no evidence was found in favor of malignancy (Figure 1). Histochemically Congo Red and Crystal Violet staining was positive (Figure 2) in the proteinaceous amorph material deposits. Congo Red with potassium permanganate was performed and loss of affinity to Congo Red revealed was observed. AA amyloid and Beta-2 microglobuline staining was found negative by immunohistochemistry. All systems were examined and no other site of involvement, etc. kidney, gastrointestinal tract, subcutaneous adipose tissue, was found. Due to the loss of affinity to Congo Red stain by potassium permanganate pretreatment, the diagnosis was established as secondary Amyloidosis of the prostate. The case is in the sixth year of follow- up in rheumatology clinic under colchicine treatment without any sign of systemic involvement.

Discussion

Only about 6-9% all cases of amyloidosis are localized to one organ system. Respirotary tract, skin, brain, heart, pancreas and genitourinary tracts are the most common sites of involvement (1,2). Our patient showed amyloid deposition localized to prostatic stroma. Primary amyloidosis consists of monoclonal antibody light (AL) chain deposits and secondary amyloidosis is associated with chronic inflammation and consist of amyloid A protein (AA). Other type of amyloidosis have been described as hereditary and senile forms (1).

Amyloid deposition is staining amorph pink on hematoxyline eosin. Congo Red staining and polarized light microscopy is used for differantiates amyloid from other proteinaceous materials by the apple green birefringerence. Amyloidosis can be systemic or localized and the localized form can be found either only as a small-single focus or as a large nodular mass. Localized amyloidosis are thought to be amyloid depositis that arise from the cells in the region of accumulation (3).

Amyloid deposition in the lower urinary tract is often associated with malignancy. Distal third of ureters is the most common involvement area and may lead obstruction at that segment of ureter (1).

Amyloidosis is a slowly progressive disease and the treatment usually is directed towards reducing precursor production, inhibiting the synthesis and extracellular deposition of amyloid fibrils and promoting lysis of existing amyloid deposits (1).

Histochemical and immunohistochemical technics is used for diagnosis and for determining the type of amyloid (1,2,3,4,5).

Seminal vesicle involvement is more frequently reported than the prostate, and in the majority of the reported cases, there is no indication of systemic amyloidosis (2).

Prostatic amyloidosis requires treatment. However, treatment may be warranted if systemic amyloidosis affecting multiple organs (2).

Conflicts of Interest

There are no conflicts of interest.

References

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Correspondence
Nebil Bal MD, Başkent University Faculty of Medicine, Adana Research and Practise Center, Clinic of Pathology, Adana, Turkey
Gsm: +90 532 363 92 26 **E-mail:** nebilbal@yahoo.com

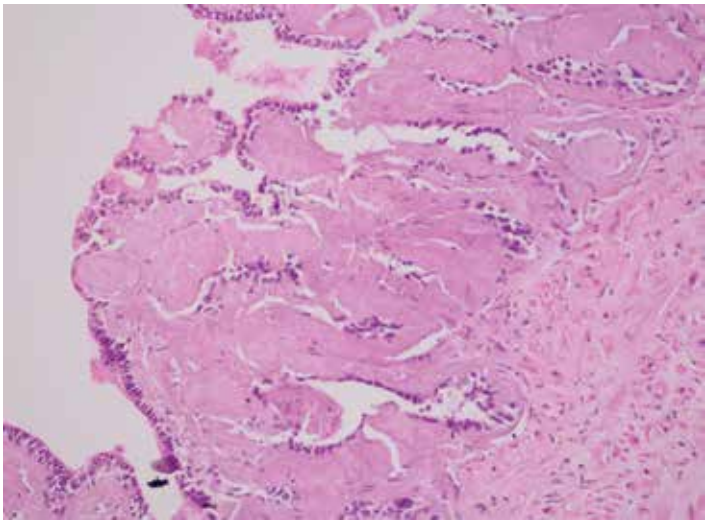

Figure 1. Proteinous amorph material at extracellular matrix (HE, x200)

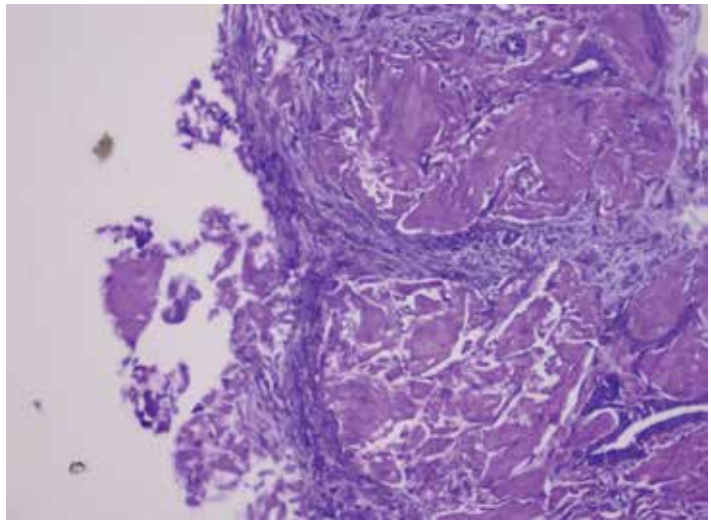

Figure 2. Crystal Violet staining was positive at deposition of proteinous amorph material (Crystal Violer, x200)

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