

Diagnosis of metastatic prostate cancer in patient applying with drug prescription request: window of opportunity in primary care

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ABSTRACT

Family Medicine healthcare centers are the primary point of contact for addressing all health issues of individuals. Comprehensive medical histories and physical assessments are crucial for the prompt identification and treatment of various illnesses. This study presents a case of metastatic malignancy without active symptoms. During the patient's visit to the family medicine outpatient clinic, laboratory tests were conducted, tests from another medical facility were analyzed, and a prescription for a medication that was frequently taken was obtained.

Keywords: Family medicine, prostate cancer, periodic health examinations

Introduction

Family Medicine is the first point of application for all health problems of individuals. Prescribing the medications used in the treatment of chronic diseases has an important place among the reasons for application. A good anamnesis and physical examination, if necessary, are of great importance in the early diagnosis and treatment of diseases that may be overlooked. Regardless of the reason for admission to primary care, the physician should make a detailed assessment of the course of existing diseases, the presence of any complaints, the correctness and continuity

of medication use for each patient. At the same time, all screenings including periodic health examinations applied in primary care should be questioned at each application, informing those who have not been screened at the appropriate interval and ensuring that all screenings compatible with age/gender are completed is of great importance in secondary prevention within the scope of preventive medicine of family medicine. Studies show that screening rates based on risk factors are still extremely low among individual applicants, despite the fact that prostate cancer screening is not part of Türkiye's national cancer screening program. Prostate examination

and PSA testing rates among men over 40 are 9.3% and 6.7%, respectively, according to data from earlier studies; these rates rise to 36.2% and 23.9% among men over 60.^[1] In this study, we present a case of metastasized malignancy with no active complaints who applied to the Family Medicine Outpatient Clinic for evaluation of laboratory tests performed in another health center and for prescription of the medication.

Case

A 71-year-old male patient came to our outpatient clinic to have his laboratory tests, which were performed at another health center, evaluated and to have his proton pump inhibitor medication for gastritis prescribed. The patient had no active complaints. However, upon further questioning, he reported intermittent abdominal bloating and vague, short-term, non-spreading, spontaneous pain in the right upper quadrant that had persisted for about one to two months. When asked about additional symptoms, the patient did not report nausea or vomiting with the pain, nor was fever present. However, he stated that there was discharge from the anal area during straining while defecating. A review of the patient's medical history demonstrated that he has been under follow-up and treatment for benign prostatic hyperplasia since 2021 and has been prescribed

alfuzosin (1×1) for this condition, along with pantoprazole (1×1) for the management of gastritis. No other comorbid conditions were identified, and the family history was unremarkable. Vital signs upon admission: blood pressure: 125/75 mmHg; pulse: 79 beats per minute; body temperature: 36.7°C.

Abdominal examination revealed normoactive bowel sounds and a palpable mass measuring approximately 8x10 cm with clear borders extending under the right 12th rib. A dull sound was obtained with percussion of the mass. Other system examinations were normal. Given the preliminary diagnosis of hepatomegaly, biochemical tests and a abdominal ultrasound were ordered to visualize the mass. The laboratory test results obtained from the patient are summarized in Table 1.

Enzyme-linked immunosorbent assay (ELISA) tests were normal. Abdominal ultrasonography result "There are several adjacent lesions in the liver, the largest of which is 6 cm in size, slightly hyperechoic with a halo around it, which may belong to the lesion. A 3 cm cyst was observed in liver segment 4."

B symptoms were questioned after the patient returned with the test results, but no noteworthy findings were found. The patient was referred to Urology and General Surgery for further

Table 1. The laboratory test results

Test	Result	Minimum – Maximum Reference
Urea (mg/dL)	68 mg/dL	19 - 44
Creatinine (mg/dL)	2.6 mg/dL (baseline: 1 mg/dL)	0.7 - 1.2
ALT (U/L)	17 U/L	0 - 41
AST (U/L)	23 U/L	15 - 40
GGT (U/L)	290 U/L	10 - 71
ALP (U/L)	277 U/L	40 - 129
LDH (U/L)	403 U/L	135 - 225
Hemoglobin (g/dL)	10.1 g/dL	13.4 - 17.6
Fecal occult blood (ng/dL)	Positive (150 ng/dL)	0 - 100

ALT: Alanine Aminotransferase, AST: Aspartate Aminotransferase, GGT: Gamma-Glutamyl Transferase, ALP: Alkaline Phosphatase, LDH: Lactate Dehydrogenase.

examination and treatment. During the follow-up, it was discovered that Urology requested uroflowmetry and prostate imaging with the preliminary diagnosis of "Postrenal Acute Kidney Injury (AKI)?" As a result of the general surgery consultation, a mass in the rectum was detected during a digital rectal examination, and further imaging was recommended with the prediagnosis of "primary or metastatic malignancy?" A Transurethral Resection of the Prostate (TURP) biopsy was performed, showing that the prostate was adherent to the bladder wall. The pathology result showed a Gleason pattern of 4+4=8. General Surgery evaluated the liver lesions in favor of metastasis, and Positron Emission Tomography–Computed Tomography (PET-CT) was decided upon to locate the primary malignancy focus. Endocolonoscopy was also planned due to occult blood positivity in stool. The PET-CT examination of the patient was reported as follows: "The prostate gland invades the bladder, rectum, and bilateral seminal vesicles, exhibiting marked pathological increased F-18 Fluorodeoksiglukoz (FDG) uptake. Pathological increased F-18 FDG uptake is observed in multiple subcentimeter soft tissue density areas (lymph nodes?) in the periprostatic and pararenal areas. Pathological increased F-18 FDG uptake is also observed in multiple hypodense lesion areas in the liver." Written and verbal informed consent was obtained from the patient for the publication and use of all relevant clinical data.

Discussion

Cancer is a major public health problem in the 21st century. It is responsible for nearly one in six (16.8%) deaths worldwide and almost one in four (22.8%) deaths due to noncommunicable diseases. According to the GLOBOCAN 2022 study, prostate cancer is the most commonly diagnosed cancer in men in 118 countries.^[2] According to Death and Cause of Death Statistics published by the Turkish Statistical Institute in 2023, tumors ranked second among the causes of death in Türkiye with a rate

of 14%.^[3] The Ministry of Health database shows that prostate cancer was the second most common type of cancer in men in 2020.^[4] A retrospective study by Gandaglia et al., which reviewed 74,826 metastatic prostate cancer cases, found that the mean age of the patients was 74 years. The sites of metastasis were bone (84%), distant lymph nodes (10.6%), liver (10.2%), thorax (9.1%), brain (3.1%), and digestive system (2.7%).^[5] The results of the European Randomized PSA Screening Study (ERSPC Study) show that prostate cancer mortality decreased by 21% in men who underwent PSA screening compared to those who did not.^[6] In a case series evaluating the impact of atypical clinical presentations on delayed diagnosis of prostate cancer, it was reported that patients presenting with gastrointestinal symptoms and systemic manifestations were diagnosed at advanced stages due to prostate cancer not being initially considered in the differential diagnosis, representing missed opportunities for timely screening and early detection.^[7] Similarly, in the present case, prostate malignancy was identified only after advanced diagnostic evaluation. According to the national cancer screening program in our country, men should be examined regularly by a urologist and have a prostate-specific antigen (PSA) blood test starting at age 50, or age 40 if they have a family history of prostate cancer, to enable early diagnosis.^[8] Patients should be informed and referred to a urologist for early diagnosis and prevention.^[9]

This case highlights that, in family medicine practice, every patient encounter—including visits for prescription renewals—should be viewed as an opportunity for comprehensive and ongoing patient assessment, regardless of the presenting complaint. Periodic health examinations performed in primary care are of vital importance in the early diagnosis of cancer and are accepted as an effective tool for reducing morbidity and mortality.^[10,11] Family physicians should meticulously question patients about

their personal and family history and previous screening tests, and refer them to the relevant branch for further examination and treatment when necessary. They play a critical role in these screening and referral processes because they are the community's primary point of contact in the health system. Thus, enhancing family physicians' comprehensive patient assessment skills and their effective use of protocols for early diagnosis will improve the health system's effectiveness in combating cancer.

Ethical approval

Ethical approval has not been obtained from the institution. Written and verbal informed consent was obtained from the patient for the publication and use of all relevant clinical data.

Author contribution

The authors declare contribution to the paper as follows: Study conception and design: YŞSK, ÜA, YÇD; data collection: ÜA, TE, RŞ; analysis and interpretation of results: YŞSK, ÜA, YÇD; draft manuscript preparation: YŞSK, ÜA, YÇD. All authors reviewed the results and approved the final version of the article.

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Conflict of interest

The authors declare that there is no conflict of interest to disclose.

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