Ectopic prostate tissue

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• ABSTRACT

The finding of ectopic prostate tissue is an interesting event of urologic surgical pathology, given that from the clinical perspective it simulates neoplastic processes of the urothelium. The case presented herein is of a 25-year-old man with nonpainful gross hematuria in whom imaging studies and endoscopy revealed a tumor in the prostatic urethra adjacent to the bladder neck.

Keywords: Prostate tissue, ectopic, urethra polypoid lesion, Mexico.

• INTRODUCTION

Ectopic prostate tissue has been described mainly in the male urethra, bladder neck, trigone, and less frequently, in the bladder. Endoscopically, this tissue presents as polypoid, sessile, or pedunculated lesions suspected of being malignant.

• CASE PRESENTATION

A 25-year-old man presented with asymptomatic gross hematuria after doing physical activity. Three days later he repeated the same physical activity and presented with blood in his urine two more times, for which he sought medical attention. He complained of no other urinary symptomatology.

Laboratory tests and radiology studies reported a normal full blood count, a normal blood chemistry, urinalysis with 20 to 30 erythrocytes per field, hemoglobin +++, one to two leukocytes per field, and abundant calcium oxalate crystals in the sediment.

The following imaging studies were carried out: Plain abdominal x-ray was taken to evaluate the kidney

• RESUMEN

El hallazgo de tejido prostático ectópico constituye un evento interesante de la patología quirúrgica urológica, ya que desde el punto de vista clínico simulan procesos neoplásicos del uroitelio. Se presenta el caso de un paciente masculino de 25 años de edad, con hematuria macroscópica no dolorosa, en quien los estudios de gabinete y endoscopia mostraron una lesión tumoral en uretra prostática, adyacente al cuello vesical.

Palabras clave: Tejido prostático, ectópico, lesión polipoi- de uretra, México.
silhouettes and the urinary tract projected no radio-opaque shadow (Figure 1). Kidney ultrasound showed normal kidney silhouettes (Figure 2). Bladder ultrasound identified a 1.34 cm polypoid lesion on the bladder floor (Figure 3). Excretory urography showed a normal upper urinary tract with no image of a bladder-filling defect (Figure 4).

Endoscopic revision was carried out under peridural anesthesia and revealed a pedunculated papillary polypoid lesion adjacent to the bladder neck at the 9 o’clock position that partially occluded the bladder neck opening (Figure 5).

Transurethral resection of the lesion was carried out as shown in Figure 6.

The initial histopathologic report was inverted transitional papillary adenoma. A second opinion based on immunohistochemistry studies reported a polypoid lesion covered by normal urothelium with atypical hyperplastic prostatic glands and a layer of well-defined basal cells.

Immunohistochemistry results for prostate tissue: positive cytokeratin 8/10; negative cytokeratin 7/20; negative racemase P504S; positive prostate specific antigen (PSA); positive prostatic phosphatase acid.

Immunohistochemistry for the urothelium: positive cytokeratin 18/8; positive cytokeratin 7/20; positive racemase p504S; negative PSA and phosphatase acid.

Diagnosis was ectopic prostate tissue adjacent to the bladder neck (Figures 7 to 12).

**DISCUSSION**

Reports in the literature have described prostate tissue in a variety of locations and sizes. More frequently it has been reported in the male urethra, bladder neck, trigone, and less often in the bladder (the bladder supratrigonal region and the dome).\(^1\)\(^6\)\(^7\)

Malignancy has also been described (adenocarcinoma in these ectopic prostate tissues).\(^6\)\(^7\)

Generally these patients present with nonpainful hematuria and endoscopically the tissue can be confused with a malignant lesion due to the papillary appearance of its surface having a polypoid, sessile, or pedunculated aspect.

Microscopically, in the H&E staining, benign prostatic glands are observed with basal cell layers...
surrounded by fibromuscular stroma and covered by benign endothelium. Immunohistochemistry for PSA and prostatic phosphatase acid were strongly positive.

During embryogenesis, bladder and urethra development takes place from the fusion of the anterior portion of a caudal mesodermal proliferation of a primitive endodermal cloaca and mesonephric ducts. The first development of benign prostate tissue occurs at 12 weeks of gestation. At 18 weeks a set of glands is developed in the submucosa of the bladder neck or trigone and normally disappears in the adult, as has been shown in autopsy studies of the prostate. For this reason, some authors do not consider the lesion to be ectopic, but rather view it as a remnant of structures arising from embryonic development.8-10

A hypothesis has been proposed that explains ectopic prostate tissue lesions as the result of abnormal migration of non-differentiated embryonic prostate tissue from the usual sites to distant areas, with possible androgen hormone stimulation in adulthood. Albarran and Motz first described embryonic prostatic glands in the bladder neck, suggesting that these glands have the potential to migrate within the bladder submucosa.11 This hypothesis could explain the finding of prostatic tissue outside the genitourinary tissue, such as in presacral pericolic fat,12 in the spleen,13 in the retrovesical space,14 and even more interestingly, in the uterine cervix.15,16

The first case of ectopic prostate tissue was reported by Nicholson in 1922 in a patient that presented with a 5 cm mass in the bladder dome, adjacent to the terminal portion of a urachal remnant.13

**CONCLUSIONS**

Ectopic prostate tissue is a rare pathology that can simulate malignant neoplasia of the urothelium. Its diagnosis...
is made by an experienced pathologist and on occasion through the use of immunohistochemistry.

REFERENCES