



Inflammation and infection

A rare case of huge villous adenoma of the renal pelvis deforming the abdominal wall

Boyan Stoykov^{a,*}, Nikolay Kolev^a, Vladislav Dunev^a, Pencho Genov^b, Jitian Atanasov^a, Svetlana Mateva^c

^a Department of Urology, Medical University Pleven, Bulgaria

^b Department of Urology, UMHAT - Ruse, Bulgaria

^c Department of Pathoanatomy, Medical University Pleven, Bulgaria



ARTICLE INFO

Keywords:

Villous adenoma
Muconephrosis
Genitourinary tract

ABSTRACT

The villous adenoma is a benign epithelial tumor affecting most often the gastrointestinal tract, especially the colon and rectum. The incidence of this disease in the genitourinary tract is less than 1% as the most commonly affected organs are bladder, urethra, prostate, vulva and vagina. Only several cases of villous adenoma in the renal pelvis have been reported in the scientific literature. The disease is more common in men between the ages of 40 and 70. We presented a rare case of huge villous adenoma of the renal pelvis in 61 years old man.

Introduction

The villous adenoma is a uncommon tumor that rarely affects the urinary tract. Only a few cases of this condition involving the upper urinary tract have been described in the world literature. The cause of this disease is intestinal metaplasia of the urothelium due to chronic inflammation caused by a stone in the renal pelvis or other reasons. Characteristic of the disease is the appearance of mucus in the kidney (muconephrosis), which is produced by goblet-type mucin-producing cells. Careful monitoring of this rare condition is mandatory, because it may be accompanied by kidney cancer.

Case report

We presented a rare case of huge villous adenoma of the renal pelvis in 61 years old man. The patient reported the presence of staghorn stone in the right kidney, dating from 2013. For several months, the patient has been complaining of pain and discomfort in the right lumbar region. In recent weeks, he has noticed the appearance of intermittent muco-suria. During physical examination, a large tumor mass deforming the abdominal wall was identified. The right kidney, with huge size (300/200 mm) with complete loss of parenchyma, the presence of severe hydronephrosis and large staghorn stone, are visualized from the contrast-enhanced CT (Fig. 1). No significant pathological changes in the lung area were observed except for a small pleural effusion on the

right and aortic sclerosis. The results of laboratory tests of blood and urine showed no deviation from the norm. The patient was offered a robot-assisted nephrectomy of the affected kidney, which was performed by the robotic system - Da Vinci Xi. The surgical specimen (Fig. 2) weighed 956 g and measured 30.5 × 15.0 × 12.0 cm. It was composed of numerous mucus-filled caverns and large staghorn stone. The postoperative period was without complications. The patient was discharged on the fourth post-operative day. The histological result was: "Renal parenchyma with chronic pyelonephritis. In pyelone, presence of villous adenoma with mild dysplasia developed on the basis of intestinal metaplasia" (Fig. 3).

Discussion

As a localization, the villous adenoma is most commonly localized in the gastrointestinal tract (mostly the colon and rectum). It is much rarer in the hepatobiliary and genitourinary systems. Assor reported the first urothelial villous adenoma in the genitourinary tract in 1978.¹ He described the presence of a mucous-producing lesion in the bladder. In 2002 Park reported the first villous adenoma of the renal pelvis and introduced the term "muconephrosis".² According to Bath the major risk factors for villous adenoma are chronic irritation and inflammation due to urinary tract calculus and infection.³ It is very difficult to diagnose villous adenoma on imaging or clinically because of the lack of specific features. Usually the patients are middle aged or elderly males. The main

* Corresponding author. Department of Urology, "Saint Marina" Hospital, Medical University Pleven, Balgarska aviatzia Street, Pleven, 5800, Bulgaria.

E-mail address: atanasovmd@yahoo.com (B. Stoykov).

<https://doi.org/10.1016/j.eucr.2020.101183>

Received 16 March 2020; Accepted 28 March 2020

Available online 6 April 2020

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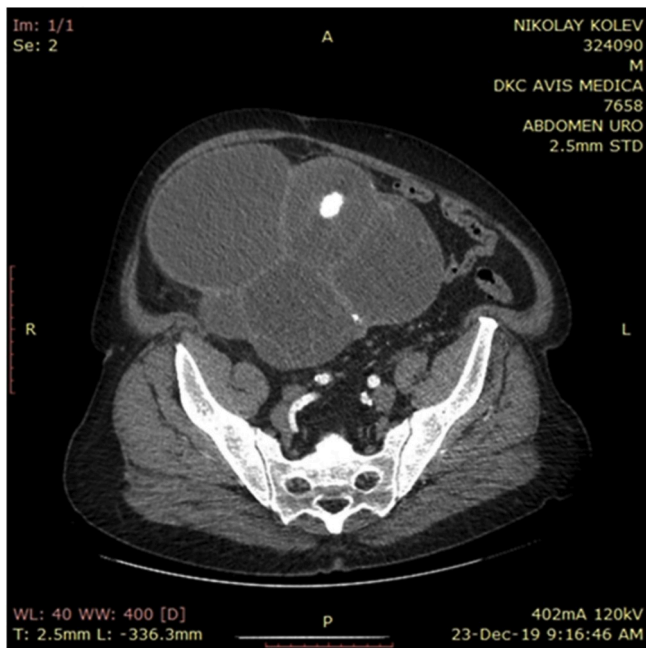


Fig. 1. CT scan findings: Huge renal tumor with severe hydronephrosis and large staghorn stone.



Fig. 2. The surgical specimen.

symptoms are dull abdominal pain and palpable mass. Usually, on the

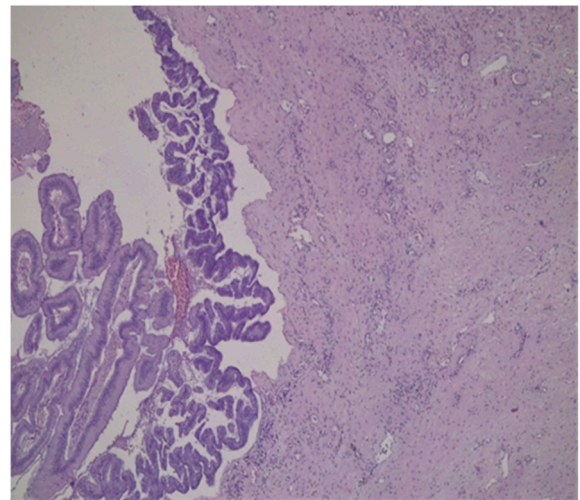


Fig. 3. Villous adenoma with papillary architecture and features of chronic pyelonephritis (H & E, 40x).

CT-scan hydronephrotic kidney with calculi can be seen. It is essential to differentiate the villous adenoma from adenocarcinoma. According to Spiers villous adenoma is a precursor to adenocarcinoma of renal pelvis,⁴ that's why he recommends total nephrectomy in all cases. It is uncertain whether villous adenoma after partial nephrectomy may pass in adenocarcinoma, therefore this approach is not recommended.⁵

Conclusion

The diagnostics of the villous adenoma of genitourinary tract is challenging prior to surgical treatment, because of nonspecific clinical manifestations and imaging findings. This neoplasm is a precursor to malignancy total nephrectomy is advisable. It is found that if the operation is done on time, the prognosis is good. Because villous adenoma of the renal pelvis is rare, there is no standard protocol for follow-up and management.

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