Acute Urinary Retention due to a Prostatic Cystadenoma: A Case Report

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Key words: acute urinary retention; prostatic disease; cyst;surgical treatment; benign lesion.

INTRODUCTION

Papillary cystadenoma of the prostate is a rare benign tumor that affects the prostate gland[(1,2)]. It is usually a large size tumor and is located between the rectum and the urinary bladder. The benign nature of the tumor is suggested by the clear delimitation from vicinity organs. The patient usually presents with obstructive voiding symptoms, like: urinary intermittency, poor stream, a sensation of incomplete emptying and straining. Defecation symptoms might be present due to the compression of the prostatic tumor on the lower gastrointestinal tract. Imaging provides valuable information about localization and relation of the tumor with adjacent organs, it might also offer information about the nature of the tumor. Therefore, imaging information proves to be very helpful in planning surgical management which usually is complete excision. We report the case of a prostatic cystadenoma in a male patient who presented himself to the emergency unit with symptoms of acute urinary retention.

CASE REPORT

A 61-year-old male patient, from the urban area, was admitted to our clinic for sudden onset pain in the lower region of the abdomen with fever (38°C), and inability to urinate from 12 hours prior to admission. The patient complained of urgency, frequency, inability to completely empty his bladder with an evolution of around 5 months prior to admission. The patient had never received urological treatment. Physical examination revealed a feverish patient (38°C) with palpatory tenderness in the lower abdomen, a mass which extended from the umbilicus to the pubis of approximately 10 cm in diameter, which was painful both spontaneously and at palpation and revealed characteristics of fluid content at percussion. An 18 Fr urinary catheter was inserted and approximately

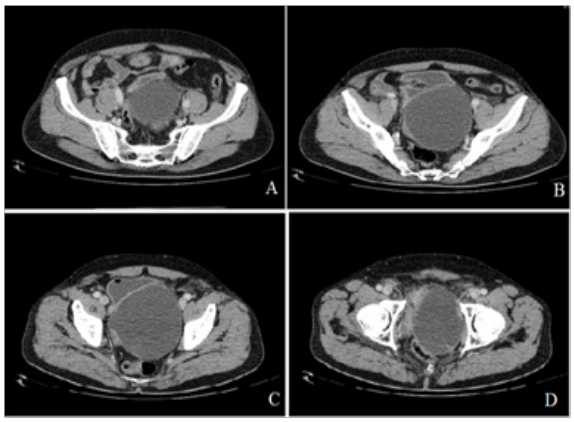

Figure 1. Pelvic cystic mass of uncertain origin with thin walls with fluid densities

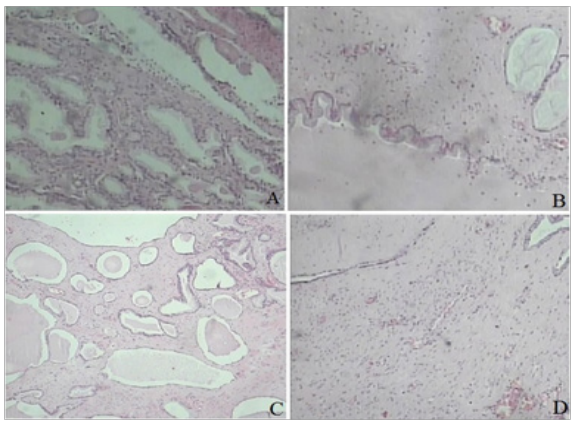

Figure 2. Histological examination

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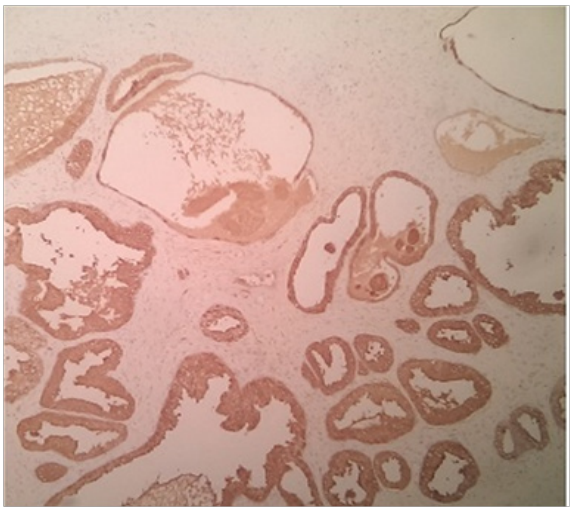

Figure 3. Immunohistochemical staining

2 liters of puddled urine was evacuated. Subsequently to the evacuation of urine, tumor mass and pain disappeared. Rectal examination revealed an enlarged prostate of normal consistency and a tumoral formation of uncertain origin, with increased consistency and fluid content that could be palpated through the anterior rectal wall. Rectal mucosa was normal in palpation and the tumoral mass was mobile, thus demonstrating its extrarectal origin. Laboratory findings were normal except for leukocytosis (17000/mm^3). PSA level was normal. Transabdominal ultrasound was performed revealing an anechoing cystic mass in the retrovesical space with multiple thin, echogenic internal septations. A contrast-enhanced CT followed the ultrasound exam showing a pelvic cystic mass of uncertain origin with thin walls and with fluid densities, without iodine caption and with fine septum of 14.6/13.2 cm in diameter. The mass had displaced the bladder anteriorly and was compressing it. A separation plan was visualized between the cystic mass and the bladder. The rectum was not invaded by the tumoral mass. (**Figure 1 A-D**). Even if it would have supported a better description of topography of the lesion, no RMN was performed. The patient received antibiotics (cyprofloxacinum 400mg/12 hours), painkillers (metamizolum 1g/6 hours), antipyretics (paracetamolum 1g/8 hours) and electrolyte rebalancing treatment. Not being sure about the origin of the lesion and not having experience with the conservative treatment of these lesions, we decided to proceed with surgery the day after hospitalization. We performed a midline umbilical-pubic incision. We incised the retrovesical peritoneum and penetrated into the retroperitoneal space, where we identified a 16 cm cystic wide grayish tumor mass, apparently of prostatic origin. The tumor mass compressed the bladder and the inferior rectum. The left ductus deferens was anteriorly dislocated. The tumor mass detached itself from the posterior wall of the bladder. In the lower part it was adherent to the prostate, which showed callous area on the contact surface with the cystic mass. Dissection continued laterally, highlighting the ureters. Posterior dissection cleared the tumor mass from the superior rectum. In order to obtain a better access to the prostate, the tumor mass was punctured, followed by partial evacuation of clear, sero-citrine liquid, without fetid odor (no sampling for histopathological examination was performed). The remaining tumor mass was difficultly detached from the prostate during which accidental injury to the anal canal happened. The cyst was completely excised, without macroscopic highlighting of any tumor remnants. The anal canal injury required rectoraphy with protective colostomy ("loop colostomy"). Postoperatively, the patient's recovery was slow but favorable, with discharge on the 20th day after admission. Two months later, the patient underwent surgery for restoration of the large bowel continuity. Macroscopically the tumour could be described as a 12 cm unilocular lesion. The walls were consistent with an area of thickening of 2.5 / 2 cm .The pathological examination revealed, amid benign prostatic hyperplasia (**Figure 2A**), a cystic lesion with fibrous structure (**Figure 2B**), lined by acinar type epithelium that included adenomatous proliferation (**Figure 2 C – detail**) with papillary extensions projected intraluminally (**Figure 2D**). Immunohistochemical staining was performed for Vim, CD34, p53, 34betaE12, CD30, CK7, but was positive only for PSA (**Figure 3**)

DISCUSSION

Prostatic cystadenoma is a rare condition with less than 20 cases reported in the literature[3]. It is a benign tumour that can reach large sizes without embedding the pelvic organs. It is usually located between the urinary bladder and rectum and it may originate from the prostatic tissue, the seminal vesicles, or the ejaculatory ducts. Histologically, this lesion is made out of cysts lined by cuboidal or columnar epithelium and prostatic glands are arranged in a fibrous stroma. Immunohistochemically, the membrane of the epithelial cells presents prostatic-specific antigen thus proving the prostatic origin of the lesion. Because of the large size of the lesion the patient presents with symptoms of obstruction of the urinary flow and sometimes a palpable mass in the lower abdomen. In some cases, the first symptom of this condition is primary infertility with azoospermia.[4] To the practitioner, the prostatic cystadenomas presents a number of diagnostic and therapeutic challenges. The differential diagnosis is made with other prostatic lesions such as mùllerian duct cysts and prostatic utricle cysts, ejaculatory duct cysts, retention cysts, benign prostatic hyperplasia with cystic degeneration, cavitary prostatitis, prostatic abscess, other rare cystic lesions (echinoccocus cyst, bilharzial cyst, cystic carcinoma) [5]. Because of their midline development, the mùllerian cyst and the prostatic utricle cyst are discovered incidentally through ultrasonography. They are usually located at the base of the prostate, in the back of the urinary bladder neck and they do not contain seminal fluid. The retention cysts and cystic degeneration develop laterally, they do not contain sperm cells and are generally asymptomatic in benign prostatic hyperplasia and are usually endorectal ultrasound findings. The vas deferens cyst is located on the median line, it contains seminal fluid and it is associated to an increased rate of infertility in men. Prostatic cysts and cavitary prostatitis occur in a patient with signs and symptoms of infection. Cavitary prostatitis and prostatic abscess manifest themselves clinically by pain with dysuria, by interrupting the urine stream, and even by acute

retention. The patient is feverish, his general state of health is altered and signs of sepsis with low blood pressure may occur. The diagnosis of echinococcosis or schistosomiasis may be easily established, based on clinical suspicions, by observing eggs of schistosoma in patient's urine or specific IgG antibody for echinococcosis in patient`s serum. Likewise, high levels of eosinophils are specific for both pathologies. Papillary cystadenoma of the prostate should be included in the differential diagnosis of retroperitoneal masses and prostatic cysts (teratoma, lymphangioma, cystic sarcoma, and multilocular peritoneal inclusion cysts). Because of its obstructive voiding symptoms the cystadenoma of the prostate usually imitates benign prostatic hyperplasia. Despite the extensive radiological assessment (CT, MRI, endorectal sonography), the diagnosis is histologically confirmed after a complete excision or biopsy. The natural evolution of cystadenoma of prostate is unknown. Faced with a pelvic mass, a surgical treatment is recommended although there are some authors who recommend that complete surgical excision might not be necessary.[6] Despite its benign nature Maluf et al. reported a case of cystic lesion recurrence in a 41-year-old male patient 12 months after incomplete surgical excision. Recurrence is treated by mass excision[7] or by pelvic exenteration[8]. In case of recurrence, Datta et al. proposed treatment by gonadotropin-releasing hormone antagonists[9]. There are numerous authors who have used laparoscopic surgical treatment for treating mùllerian cysts while we identified a single author who used this technique for treating a papillary cystadenoma with solid consistency and reduced size (7.5x5.4x2.2 cm).[10] Even if we are not experienced with the laparoscopic treatment of this type of lesion, we appreciate that this type of treatment is superior to the classic approach, by allowing a more elaborate dissection and thus by avoiding complications (lesion of the anal tract in our case).

CONCLUSIONS

Prostatic papillary cystadenoma, a benign lesion, should be included in the differential diagnosis of the retroperitoneal and retrovesical cystic lesions in all male patients with signs of acute urinary retention.

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