Case Report

Villous Adenoma of the Urinary Bladder: A Case Report

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Villous adenomas of the urinary tract are rare, in contrast to urothelial neoplasms. Most reports were scattered individual cases. Only two case series of this entity have been published. The histopathology is identical to that of the much more common villous adenoma of the gastrointestinal tract. The authors reported a case of urinary bladder villous adenoma in a 41-year-old Thai patient who complained of hematuria for one day without any other symptom. Cystoscopic examination revealed a papillary growth at the bladder neck associated with marked degree of bullous edema and bilateral mild hydroureters. The clinical diagnosis was urothelial carcinoma. Transurethral resection was performed. Histologic examination revealed typical features of villous adenoma. The tumor showed identical immunohistochemical profile to colonic villous adenoma. The patient has been well for more than a year after tumor removal.

Keywords: *Villous adenoma, Bladder adenoma, Cystitis glandularis*

J Med Assoc Thai 2010; 93 (11): 1336-9
Full text. e-Journal: *http://www.mat.or.th/journal*

Villous adenomas are rare benign neoplasms of the urinary tract[1-4]. To date, only two case series of this entity have been documented[5,6]. The common sites for urinary tract and related structures villous adenomas are bladder and urachus[5-9], but the renal pelvis, ureter and urethra can also be affected[5,6,10,11-14,16]. Not a case of urinary bladder villous adenoma has been reported in a Thai patient. Recently the authors found a Thai male patient with this rare tumor in Siriraj Hospital. With this communication report one the authors would like to experience.

Case Report

On May 3, 2008, a 41-year-old Thai man presented in Siriraj Hospital complaining of sudden onset of painless, frank hematuria for one day. He experienced no fever, abdominal pain, lower urinary tract symptoms, or any other abnormal physical change. His physical examination was within normal limits except for a mild degree of hypertension. Urine analysis showed over 200 red blood cells per one high power field. The blood chemistry and hematology test were unremarkable. The clinical impression was carcinoma of the bladder. Cystoscopic examination performed a few weeks later revealed marked degree of bullous edema of the prostatic urethra and it was not possible to pass the scope into the bladder lumen. Three days after, another cystoscopy under general anesthesia was attempted. A papillary growth, 3 x 2 cm in size, was found at the bladder neck, causing some degree of obstruction with resultant bilateral mild hydroureters. Transurethral resection of the tumor was then performed. Subsequent intravenous pyelography also revealed bilateral mild hydronephrosis. No recurrence was noted after a year.

Pathological examination of the specimen labeled as "bladder tumor" showed multiple tissue fragments with soft brown appearance, measuring 4 x 4 x 1.4 cm in aggregate. All fragments were submitted for histologic examination. Microscopically, a few fragments showed parts of a benign tumor, consisting of papillary structures lined by a pseudostratified columnar epithelium with frequent goblet cells (Fig. 1). The basement membrane was infect. Abundant mucin was present in the cytoplasm of the lining cells (Fig. 2). Necrosis, mitosis, and invasion were absent. Immunohistochemistry showed positive immunoreactivity for cytokeratin 20 (CK20) (Fig. 3) and carcinoembryonic antigen (CEA) (Fig. 4). The neoplastic cells showed negative immunostainings for cytokeratin 7 (CK7), epithelial membrane antigen

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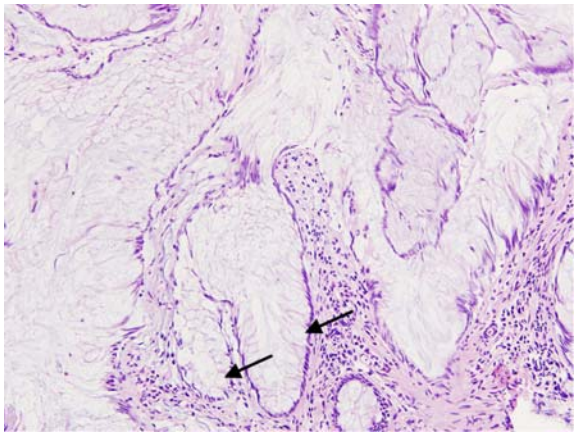

Fig. 1 Photomicrograph of urinary bladder villous adenoma showing papillary structures lined by a pseudostratified columnar epithelium with frequent goblet cells (arrow) and abundant mucin in the cytoplasm. Note absence of necrosis and stromal invasion (paraffin section; HE staining, x200)

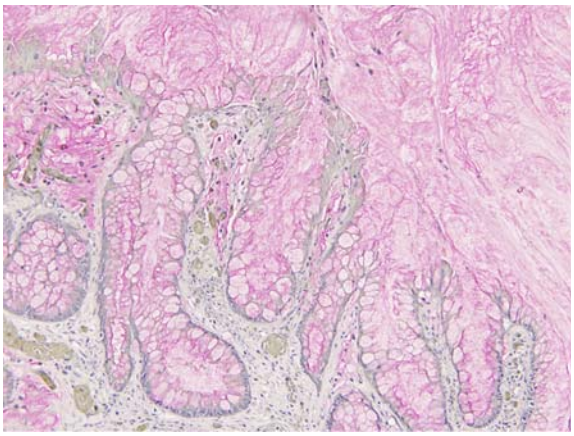

Fig. 2 Photomicrograph of urinary bladder villous adenoma (same case) showing red acid mucin in cellular cytoplasm (paraffin section; mucicarmine staining, x200)

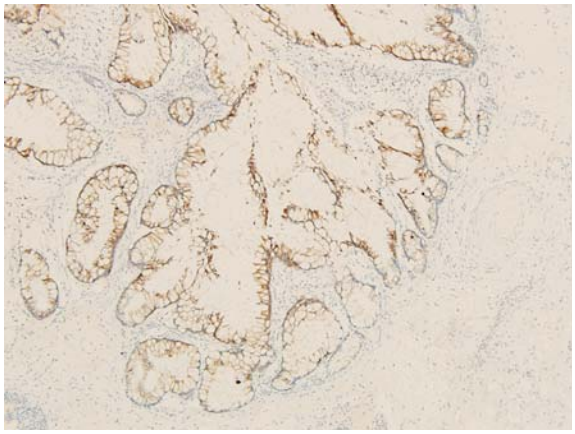

Fig. 3 Photomicrograph showing positive immunoreactivity for cytokeratin 20 in tumor cells (paraffin section; CK_{20} immunostaining, x200)

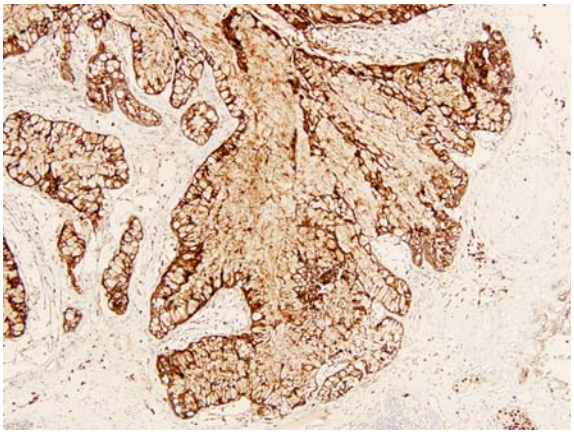

Fig. 4 Photomicrograph showing positive carcinoembryonic antigen immunoreactivity (paraffin section; CEA immunostaining, x200)

(EMA), and prostate-specific antigen (PSA). Cystitis glandularis was also identified in a few adjacent fragments (Fig. 5).

Discussion

Urinary tract villous adenomas are thus called because they are histologically identical to those common tumors of the gastrointestinal tract. This tumor can also be found in the vagina and other locations of the female genital tract[17-21]. Formerly, it was believed that urinary bladder villous adenomas were more common in males[6]. Cheng et al found that there was no gender predominance[5]. However, the patients in these two case series were elderly people[5,6]. The presented case was a relatively young man. More cases with younger age might be reported in the future.

Urinary bladder villous adenomas show positive immunoreactivity to cytokeratin 20 (CK20) and carcinoembryonic antigen (CEA) and negative epithelial membrane antigen (EMA) immunostaining in most cases[5,6]. The authors found similar stainings in

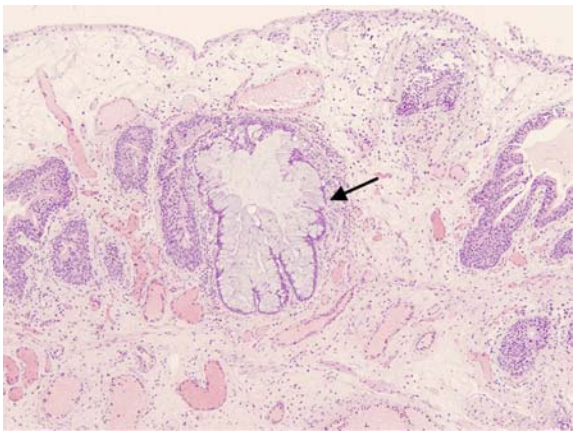

Fig. 5 Photomicrograph showing cystitis glandularis (arrow) in a tissue fragment adjacent to tumor (paraffin section; HE staining, x200)

the present study. This immunohistochemical profile is similar to that of colonic villous adenoma.

The most important differential diagnosis of urinary bladder villous adenoma is well differentiated adenocarcinoma. Severe atypia of the lining epithelium and invasion of the underlying stroma are not compatible with villous adenoma. It is not surprising to find cystitis glandularis in the adjacent mucosa[2,4]. The presented case showed this finding. In primary urinary bladder adenocarcinomas, intestinal metaplasia and cystitis glandularis are believed to have important roles in tumor development[22-27]. It is quite possible, in the authors' opinion, that villous adenomas might have similar pathogenesis as adenocarcinoma. Therefore, long-term follow-up in patients with intestinal metaplasia, cystitis glandurlaris, and villous adenomas is necessary. One should also keep in mind that coexistent adenocarcinoma and other malignant tumors might already be present in a patient with villous adenoma of the urinary bladder[5,6].

Acknowledgments

The authors wish to thank Mr. Vicha Sookpatdhee and Ms. Pornpiroon Lipimongkol for their helpful assistance in photograph and manuscript preparations.

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เนื้องอก villous adenoma ของกระเพาะปัสสาวะ: รายงานผู้ป่วย 1 ราย

สำเริง รัตนระพี, มงคล อุยประเสริฐกุล, คณาพร ปราชญ์นิวัฒน์, สุชาย สุนทราภา

เนื้องอก villous adenoma พบได้น้อยมากในทางเดินปัสสาวะ ถึงแม้จะพบได้ในหลายส่วนของระบบ แต่พบที่กระเพาะปัสสาวะได้บ่อยกว่าส่วนอื่น เช่น renal pelvis, ureter และ urethra ผู้นิพนธ์รายงานผู้ป่วยชายไทย อายุ 41 ปี ที่มาตรวจที่โรงพยาบาลศิริราชด้วยอาการปัสสาวะเป็นเลือด การตรวจด้วยการส่องกล้อง (cystoscopy) พบเนื้องอกที่มีลักษณะ papillary ที่ bladder neck ผู้ป่วยได้รับการวินิจฉัยทางคลินิกว่าเป็น มะเร็งกระเพาะปัสสาวะ การตรวจทางพยาธิวิทยา จากชิ้นเนื้อที่ผ่าตัดจากตัวผู้ป่วย พบลักษณะเฉพาะของ villous adenoma การติดตามผู้ป่วยเป็นเวลา 1 ปี หลังการผ่าตัดไม่พบการเกิดซ้ำของเนื้องอก