รายงานผู้ป่วย

Urinary Bladder Inverted Papilloma: Siriraj Experience.

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Abstract

Three cases of urinary bladder urothelial inverted papilloma were included in this report. All were clinically diagnosed as carcinomas of bladder due to its rarity. All patients complained of hematuria shortly before coming to Siriraj Hospital. The typical histopathology prompted the diagnosis of this rare entity. Histopathologic findings were described in detail for inexperienced pathologists. Association with urothelial carcinomas and malignant transformation were discussed.

Keywords: Inverted papilloma, urothelial neoplasm, urinary bladder neoplasm

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อินเวิรดเต็ดแปบปิโลมาของกระเพาะปัสสาวะ: ประสบการณ์ของศิริราช

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บทคัดย่อ

รายงานนี้ประกอบด้วยผู้ป่วยอินเวิรดเต็ดแปบปิโลมาของกระเพาะปัสสาวะ 3 รายที่พบในโรงพยาบาลศิริราช ระหว่างปี พ.ศ. 2550 ถึง พ.ศ. 2552 ผู้ป่วยทั้ง 3 ราย มีอาการปัสสาวะปนเลือด ได้รับการวินิจฉัยว่าเป็นมะเร็งกระเพาะปัสสาวะโดยแพทย์ศัลยศาสตร์ยูโร เนื่องจากโรคนี้ไม่ได้พบบ่อย รายงานนี้จึงได้บรรยายลักษณะทางจุลพยาธิวิทยาอย่างละเอียด เพื่อประโยชน์ของพยาธิแพทย์ทั่วไปที่มีประสบการณ์น้อยในการวินิจฉัยโรคในระบบทางเดินปัสสาวะ และได้กล่าวถึงความสัมพันธ์ของโรคนี้กับมะเร็งกระเพาะปัสสาวะ

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Introduction

Inverted papilloma of the urinary tract is an uncommon benign urothelial tumor. It was first described by Paschkis, a Vennese urologist, in 1927. He named it "adenoma-like polyp" or "adenoma of the urinary bladder[1]. In 1963 it was designated as "inverted papilloma" by Potts and Hirst[2]. Since then, a large number of cases has been reported[3]. At present, over 300 cases have been recorded in the English literature[4]. However, it accounts for less than 1% of all urothelial neoplasms[5]. According to its rarity, it is rarely diagnosed by both urologists and pathologists in Thailand. In Siriraj Hospital inverted papillomas were occasionally reported but almost all of them were subsequently proved to be low-grade noninvasive urothelial carcinomas with inverted growth pattern. Most of them showed recurrences later. The author would like to present 3 cases of this entity, focusing on histologic appearances, to encourage Thai urologists and pathologists to diagnose more of this rare lesion with confidence.

Case Presentation

Case 1: A 75-year-old Thai man was seen in Siriraj Hospital in June 2007 with a chief complaint of painless hematuria for a week. He was a diabetic patient with retinal angiopathy. Cystoscopy revealed a sessile lesson, 6 mm in diameter, in the urinary bladder, just right lateral to the trigone. The lesion was thought to be transitional cell carcinoma. It was then excised. The specimen received in the Department of Pathology (S07-13763) consisted of three small fragments, 0.2-1.0 cm. in size. They showed classical histology of inverted papilloma [Fig 1A, 1B

Fig 1A.

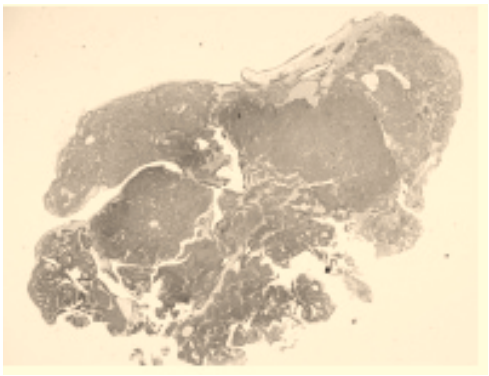

Fig 1B.

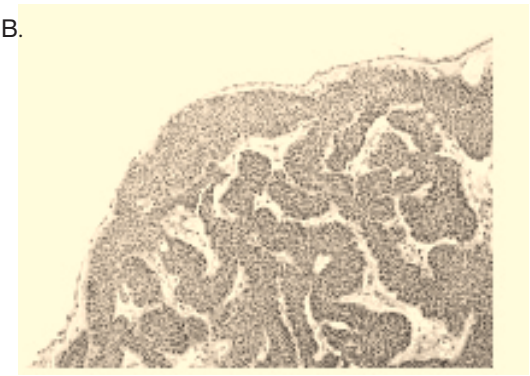

Fig 1C

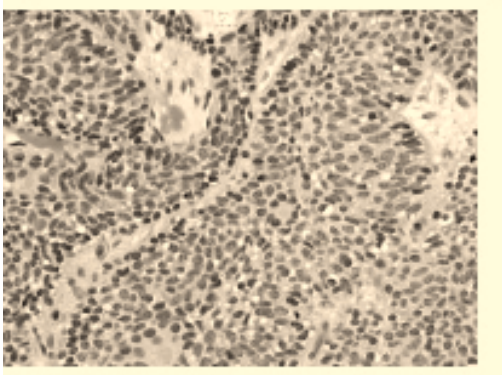

Fig 1A. *Inverted papilloma in case 1 showing one of the three fragments removed. Note circumscribed outline and smooth surface without exophytic papillary component. (H&E, 20)*

Fig 1B. *Inverted papilloma at higher magnification. Note attenuated surface urothelium, anastomosing trabeculae and minimal stroma. (H&E, 100).*

Fig 1C. *Inverted papilloma showing uniform urothelial cells in central part of the trabeculae and palisades of basal cells at the periphery as well as absence of inflammatory cell in the stroma. (H&E, 600).*

and 1C]. No recurrent tumor was found in interval subsequent cystoscopy for one and a half years after excision.

Case 2: In February 2009, a 35-year-old Thai man came to Siriraj Hospital due to occasional presence of small tissue fragments and blood in his urine for a week. Cystoscopic examination revealed a pedunculated, somewhat polypoid mass, 2.0 cm. in maximal diameter, just above the bladder neck. A diagnosis of transitionall cell carcinoma was given after cystoscopy. The excised specimen (S09-6408) consisted of multiple, relatively circumseribed, pieces of soft light brown tissue [Fig 2A]. Similar histologic appearance as case 1 was noted [Fig 2B and 2C]. He was discharged from the hospital a week later.

Case 3: A Thai patient, 34 years of age, was admitted into Siriraj Hospital on 25th March, 2009 due to difficulty in urination with presence of a pedunculated mass, about 1.5 cm. in diameter, at the bladder neck, by cystoscopy. Both ureteric orifices were normal. The lesion was simply excised on the following day. Pathologic examination of the specimen (S09-7899) showed similar histologic findings as case 1 and case 2. He was discharged on 30th March, 2009.

All cases were clinically diagnosed as “carcinoma of bladder”.

Discussion

Inverted papilloma of the urinary bladder, previous known as adenoma and Brunnian adenoma [6], can also be found in ureter, renal pelvis and urethra. In the urinary bladder, it most commonly occurs in the trigone and neck[3]. It occurs in patients

Fig 2A.

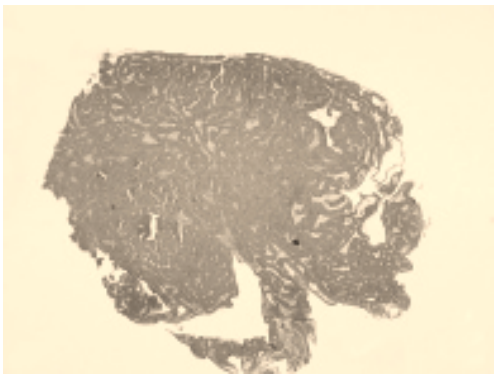

Fig 2B.

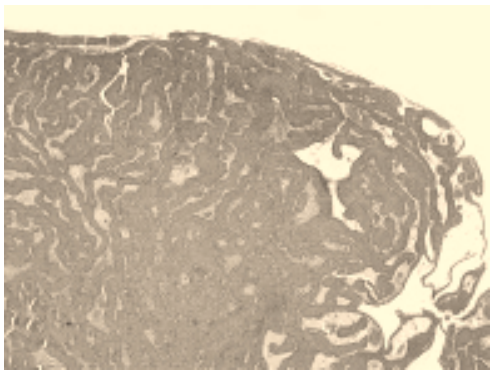

Fig 2C

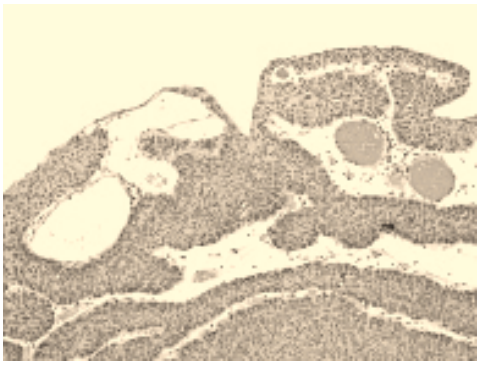

Fig 2A. *Inverted papilloma in case 2. Gross specimen showing relatively well-difined mass with smooth surface.*

Fig 2B. *Inverted papilloma at low magnification. Note absence of exophytic structures, attennated surface urothelium and anastomosing islands and trabeculae (H&E, 40).*

Fig 2C. *Inverted papilloma at higher magnification showing islands and trabeculae of urothelium originating from the surface urothelium (H&E, 200).*

Fig 3A.

Fig 3B.

Fig 3C

Fig 3A. *Inverted papilloma in case 3. Note smooth surface, attennated surface urothelium and anastomosing islands and trabeculae of urothelial cells. (H&E, 20).*

Fig 3B. *Inverted papilloma at higher magnification showing islands and trabeculae of urothelial cells in connection with the surface urothelium (H&E, 200).*

Fig 3C. *Inverted papilloma showing a focal area of squamous metaplasia (upper left). Note uniform urothelial cells and palisading basal cells at the periphery of the trabeculae and islands. (H&E, 400)*

with a wide age range, most are middle-aged, with a median age of 55 years[3,7-10]. The etiology remains unknown. Some considered it as a neoplasm[9,11] but others viewed it as a reactive process, similar to proliferative lesions like cystitis cystica and cystitis glandularis[3].

The most important differential disagnosis of inverted papilloma is urothelial carcinoma. Cystoscopically, inverted papilloma often appears as a smooth, domed-mass lesion. An exophytic papillary component should not be present. Pathologists should pay more attention when a large inverted papilloma becomes fragmented during transurethral resection, because a pseudoexophytic pattern may result. However, characteristic histology of this lesion, including anastomosing islands, cords and trabeculae with palisading basal cells, circumscribed base without muscular wall involvement, normal or attenuated surface urothelium which shows connection to the anastomosing trabeculae, minimal to absent cytologic atypia and minimal stroma (usually without inflammatory reaction) which is compressed between endophytic columns of urothelial cells, is very helpful in diagnosis. It also has to be kept in mind that low-grade invasive urothelial carcinoma may have an inverted growth pattern, mimicking inverted papilloma [9,12], but it is distinguished by cytologic atypia, mitotic activity and stromal invasion.

The relationship between inverted papilloma and urothelial carcinoma is uncertain. Inverted papilloma is generally regarded as a benign lesson.

In 1987, Caro and Tessler showed a recurrence rate of less than 1% on a review of 104 cases[8], which was much lower than low-grade papillary urothelial carcinoma[13]. An increasing number of cases of inverted papilloma with recurrences and

coexistent urothelial carcinoma have been reported by many authors[4,9,11,14-31]. In case of histologically typical inverted papilloma associated with an exophytic papillary urothelial carcinoma, the author suggest that both diagnoses should be rendered.

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