LARGE PAPILLARY CARCINOMA OF URINARY BLADDER

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ABSTRACT

A case of large papillary carcinoma (low grade) of urinary bladder was presented. The patient is a prisoner, referring from a nearby prison with a history of chronic gross hematuria, dysuria, more frequent urination and a sense of incomplete emptying of the bladder after urination, so that sometime he had to force out or compress the suprapubic area to increase urination. Multi-modality imagings (retrograde urethrogram, sonogram, CT whole abdomen) were performed and revealed multiple large polypoid masses projected out from bladder wall into the bladder capacity. The presumptive diagnosis was rhabdomyosarcoma or myoma. He was treated by total cystectomy and ileal conduit. The pathologic diagnosis was multiple large papillary carcinoma, low grade, of urinary bladder (greatest diameter of the tumor was11 cm.)

CASE REPORT

A 32-year-old Thai man was refered from a nearly prison hospital to urology division, surgery department with symptoms of progressive hematuria, dysuria, more frequent urination, sense of incomplete emptying of the bladder after urination and sometime he had to force out or compress the suprapubic area to increase urination. He was treated as urinary infection about 3 year. To rule out urethra stricture, retrograde urethrogram (RP) was done (fig.1a, 1b) and reveal mild to moderate narrowing of the membranous and prostatic part of the urethra with an evidence of large areas of filling defect, as round masses, in the bladder cavity.

Additional sonogram was done and confirmed the finding of multiple round soft tissue masses. (Fig.2a and 2b) Following of computerized tomography (CT.) of the whole abdomen (Fig.3a, 3b, 3c), it showed multiple mild enhancing rather round masses pedunculated from lateral and posterior wall of the bladder, varying in sizes about 3-8 cm with thicken of bladder wall and mild bilateral hydronephrosis. He was received transurethra resection of bladder tissue and pathologic diagnostic was papillary carcinoma invading the lamina propria. So the definite treatment was radical cystectomy with ileal conduit and to be followed up every 3 months in the first year.

Pathologic diagnosis;

- Large papillary carcinoma, low grade, of urinary bladder (greatest diameter of tumor 11 cm.)
- Tumor invades lamina propria
- No invasion of muscularis propria of bladder wall
- Chronic cystitis with hypertrophy of muscular layer together with focal fibrosis
- No evidence of metastasis to lymphnode, ureter, urethra, prostate gland and seminal vesicles.

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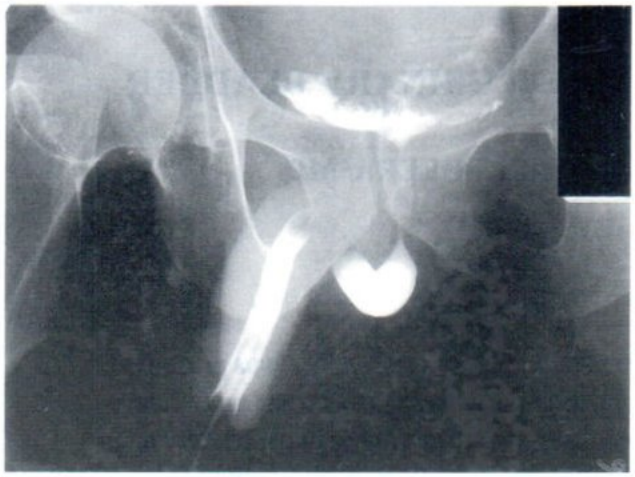
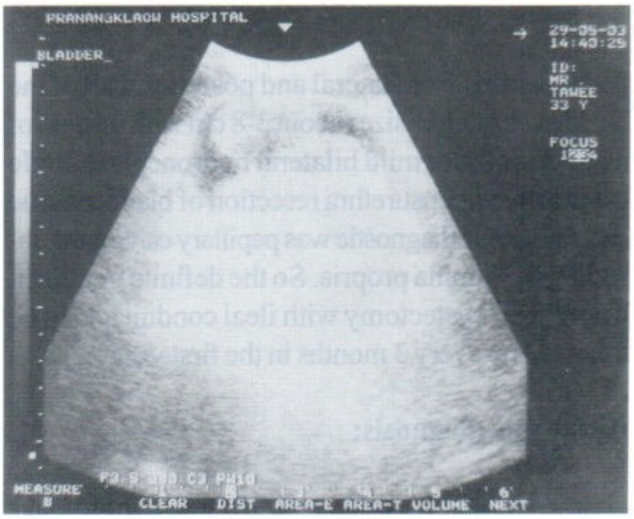


Fig. 1a,1b Retrograde urethrogram 1 a, mild to moderate narrowing of membranous and prostatic part of urethra.

Fig. 1b, Large number of filling defects looking like round masses in the bladder cavity



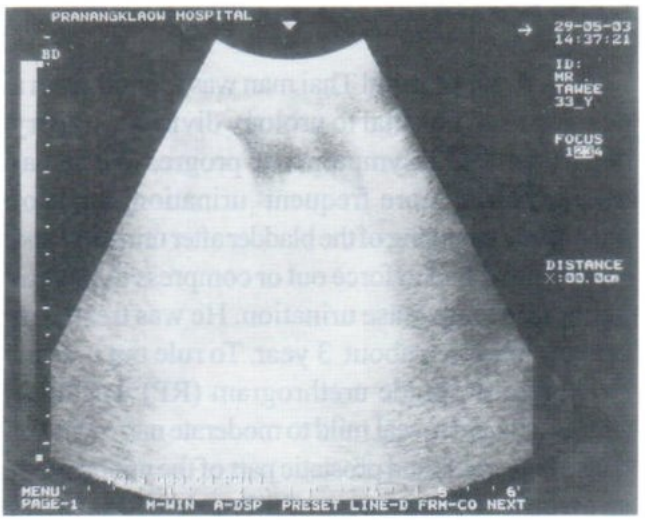
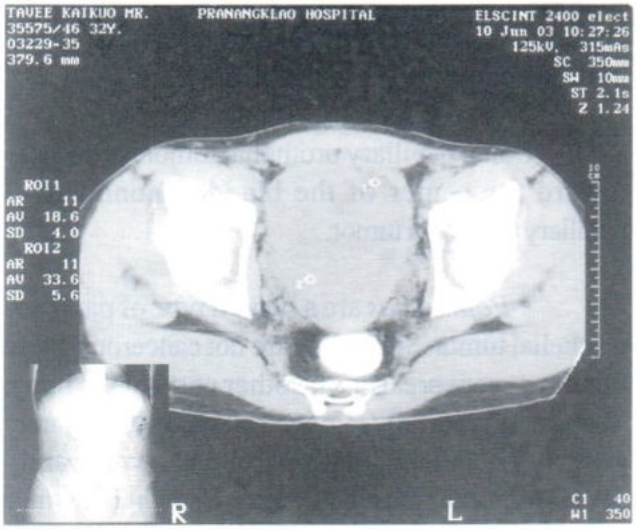


Fig. 2a,2b Ultrasonogram Multiple round soft tissue masses in the bladder cavity.



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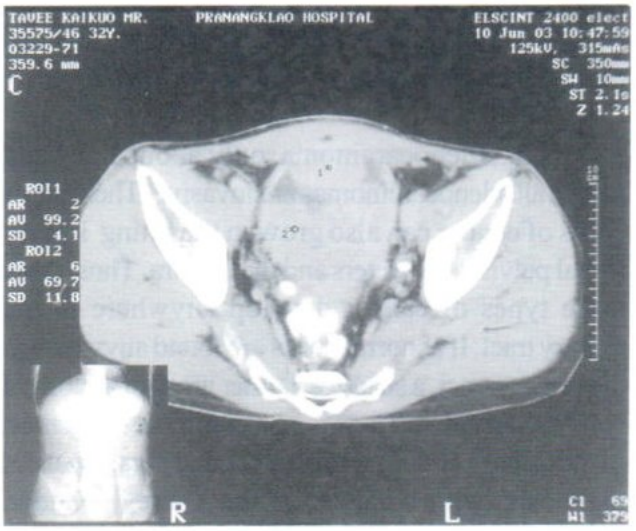

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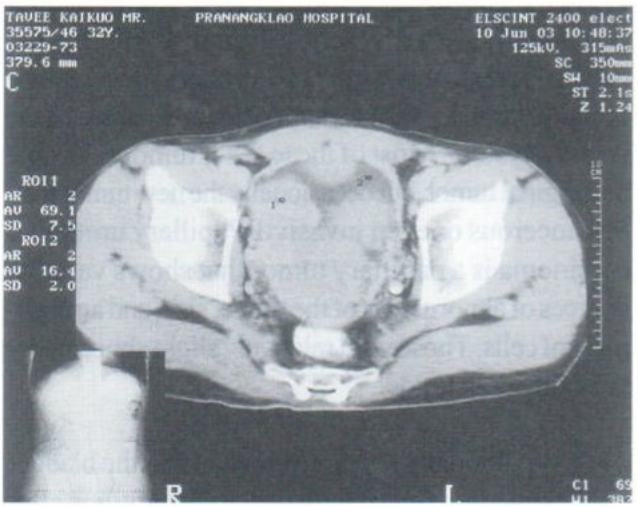

3c

Fig. 3a,3b,3c CT. whole abdomen multiple mild enhancing rather round masses pedunculated from lateral and posterior wall of bladder, varying in size 3-8 cm., with thickening of bladder wall

DISCUSSION

The bladder is a hollow pelvic organ that collects and stores urine produced by the kidneys. The wall of bladder has several layers

1. urotherium or transitional epithelium (urothelial cell or transitional cells), lines the inside of the kidney, ureter, bladder and urethra.

2. lamina propria thin zone of connective tissue, beneath the urothelium.

3. muscularis propria, the next deeper area, muscular tissue.

4. fatty connective tissue ,beyond the muscle to separate the bladder from other nearly organs.

Type of bladder cancer, the main 3 types are

1. Transitional cell carcinoma (urothelial carcinoma), is the most common form of bladder cancer, more than 90% of bladder cancer

2. Squamous cell carcinoma, about 2-3% and nearly all squamous cell carcinomas are invasive

3. Adenocarcinoma, only about 1-2% and nearly all adenocarcinomas are invasive. These same types of cancer can also grow in the lining kidney (renal pelvis), the ureters and the urethra. Thus, these three types of cancer develop anywhere in the urinary tract. If abnormal cells are found anywhere in the urinary tract, a search for other areas of abnormal cells is warranted. Therefore, a complete evaluation of the urinary system is recommended for the patient diagnosed with a cancer of the kidney, bladder, ureter,or urethra.

Rhabdomyosarcoma is very rare cancer that affects other tissues and organs more than the bladder. It usually affects infants and is seldom found in adults.

Sub- Types of Urothelial tumor.

- *Noninvasive urothelial tumors*; The cancer is only in the inner most layer of the bladder, the urothelium, not spreading to deeper layers of the bladder.

- *Invasive urothelial tumors*; The cancer has spread from the urothelium to the deeper layers of the bladder wall and it is very important to determine exactly how far into the bladder wall that the cancer has invaded. Invasion of the thick, deep muscle layer is much more serious than invasion that limited to the superficial connective tissue (lamina propria) or the superficial, thin , muscle layer (muscularis mucosae)

- *Superficial urothelial tumor*; This category includes bladder cancers that are non invasive as well as invasive cancers that have not spread deeply into the bladder wall (only lamina propria). If a cancer has invaded the bladder's main muscle layer, it is not considered superficial.

- *Papillary urothelial tumor*; papillary tumors have slender finger-like projections that grow into the hollow center of the bladder.

Some papillary urothelial tumors grow only toward the center of the bladder, noninvasive papillary urothelial tumor.

* *Papillomas* are a benign type of papillary urothelial tumor. Since they are not cancerous, these tumors never spread to the other parts of the body. They are successfully removed by surgery, and rarely grow back. Patients with papillomas very rarely develop another papillary tumor elsewhere in their urinary system. Papillary urothelial neoplasms of low malignant potential are tumors that are usually successfully treated by surgical removal. But, it is not unusual for patients with these tumors to develop one or more papillary tumors later on in other areas of the urinary system. Most of these other tumor resemble the original tumor, but occasionally the new tumor may be cancerous or even invasive. Papillary urothelial carcinoma is a papillary tumor that shows variable degrees of abnormality of the shape, size, and arrangement of cells. Those with relatively slight abnormality are called low grade.

Although they rarely invade into the bladder wall, they often return with urinary symptoms after surgery. Carcinomas with greater abnormalities, called high grade carcinomas, are more likely to invade into the bladder wall or even spread to other parts of the body.

Some papillary carcinomas grow inward toward the bladder wall and also grow outward into the bladder cavity, called invasive papillary urothelial carcinomas or cancers.

-Flat urothelial tumor;

flat urothelial carcinomas do not grow toward the hollow part of the bladder at all. Some of these only involve the layer of cells closest to the inside or the hollow part of bladder, called noninvasive flat

urothelial carcinoma or flat carcinoma in situ(CIS). Some flat urothelial carcinomas invade the deeper layers (away from the hollow part) particularly the muscle layer,called flat invasive urothelial carcinomas.

SYMPTOM

Early recognition of symptoms; hematuria (microscopic or gross), more frequency of urination with a sense of incomplete emptying of bladder after urination, pain on urination (dysuria) or force out urination.

The symptoms for bladder cancer are not specific, inflammatory condition may cause similar symptoms.

Diagnosis; We have several diagnostic tool including radiology, cystoscope and pathology. However, a definitive diagnosis of bladder cancer can only be made by bladder tissue diagnosis.

Radiological diagnosis including several methods started from,conventional x- ray; intravenous pyelogram (IVP), retrograde pyelogram, cystogram, Computerized Tomogram (CT.) Megnetic resonance. Imaging (MRI) Cystoscopy was started by urologist, for direct visual examination and for biopsy bladder of the tissue.

Pathologist, to identifies whether the tumor is benign or malignant and the type of tumor. This is essential because tumors of different types behave very differently and require different treatment regimens.

TREATMENT

Treatment of transitional cell or urothelial carcinoma is different for superficial tumors and muscular invasive tumors. Superficial bladder cancer can be managed without cystectomy, usually by tranurethral resection (TUR) with or without adjuvant intravesicle radiotherapeutic implantation by Au^{198} or Ta^{182} or intravesical chemotherapy.Muscular layer invasive tumors require cystectomy. The distinction between superficial bladder cancer and muscle invasive bladder cancer is critical and the choice of treatment can be discussec in a tumour chinic which consisted of a urologist, a pathologist, a radiotherapist and a chemotherapist.

CONCLUSION

Papillary carcinoma of urinary bladder is a sub-type of urothelial tumor or transitional tumor, which is the most common form of bladder cancer, it shows slender finger-like projections that grow into the hollow center of bladder. It can be noninvasive or invasive bladder cancer. In this reported case, he is a prisoner that has progressive gross hematuria and symptoms of partial lower urinary tract obstruct for a long time, so multiple large papillary tumor masses are demonstrated.

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