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Exophytic Growth of Ureteral Transitional Cell Carcinoma as a Cause of Retroperitoneal Tumor: A Case Report[1]

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Transitional cell carcinoma is the most common malignant tumor of the urteter, usually presenting as focal ureteral wall thickening or a mass filling the ureter lumen and combined with periureteral infiltration or adjacent lymph node enlargement. Retroperitoneal mass due to exophytic growth of ureteral transitional cell carcinoma has not been described in the literature, and we now report the CT findings in such a case.

Index words : Ureter, neoplasms
Ureter, CT

Transitional cell carcinoma (TCC) is the most common malignant tumor of the ureter. CT has been proposed as an accurate method of diagnosing and evaluating ureteral carcinoma (1, 2), allowing assessment of extraureteral soft tissue extension and nodal involvement (3). The tumor appears as a soft tissue mass, higher in density than the urine-filled, dilated ureter proximal to it (1), or as soft tissue filling defects or focal thickening, either eccentric or circumferential, of the ureteral wall (1, 4). Although a palpable mass can be the initial clinical sign of ureteral carcinoma (5), CT findings of ureteral TCC presenting as a palpable retroperitoneal mass have not, to the best of our knowledge, been described in the literatures. We recently encountered a case of exophytic ureteral TCC manifesting as a retroperitoneal tumor due to exophytic growth of the TCC, and in this paper, describe our findings.

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Case Presentation

A 55-year-old man was admitted to hospital with a palpable left lower abdominal mass and left flank pain which had arisen two months earlier. Physical examination revealed mild left costovertebral angle tenderness, routine urinalysis disclosed the presence of microscopic hematuria, and urine cytology showed that atypical cells were present.. Intravenous urography demonstrated markedly delayed faint opacification of the left kidney parenchyma, though the collecting system was not opacified. Abdominal CT (Fig. 1A - C) revealed a lobulated retroperitoneal 5×5×3 cm mass below the level of the aortic bifurcation. The anterior wall of the ureter had been invaded by the tumor, and on arterial and delayed scans, the ureter showed faint imhomogeneous, focal, peripheral enhancement. The inferior mesenteric artery, psoas muscle, and sigmoid colon had also been invaded by the tumor. Proximal and distal to the main mass, diffuse ureteral wall thickening and, an internal soft tissue mass were noted. After nephroureterectomy and tumor resection, direct tumor extension through the ureteral wall and exophytic periureteral mass formation was documented by means of pathologic examination (Fig. 1D). The final diagnosis was ureteral TCC, grade III. Adjacent lymph nodes were free from metastasis.

Discussion

TCCs are classified as papillary, infiltrating, papillary and infiltrating, or carcinoma in situ (4). Papillary TCCs occurring in 85% of cases, and are characterized by the presence of frondlike morphologic structures (4). Pedunculated or diffusely infiltrating tumors are less common. Sessile, invasive lesions behave more aggressively, and the time of diagnosis are at an advanced stage. Infiltrating tumors are characterized by thickening and induration of the ureteral or renal pelvic wall.

CT scanning has sometimes been helpful in the evaluation of ureteral wall thickening and wall enhancement(1). Our case showed faint wall enhancement of the involved ureter. and the peripheral portion of the main mass, and proximally and distally to the tumor, ureteral wall thickening and soft tissue density lesions were noted. The main mass was eccentric to the anterior wall, while the posterior ureter wall had not been invaded by the tumor.

Periureteric extension of TCC is manifested as a streaky soft tissue mass adjacent to the ureteral TCC, but the incidence of palpable large mass formation has not been reported in the literature.

TCC of the ureter most commonly (in 75% of cases)

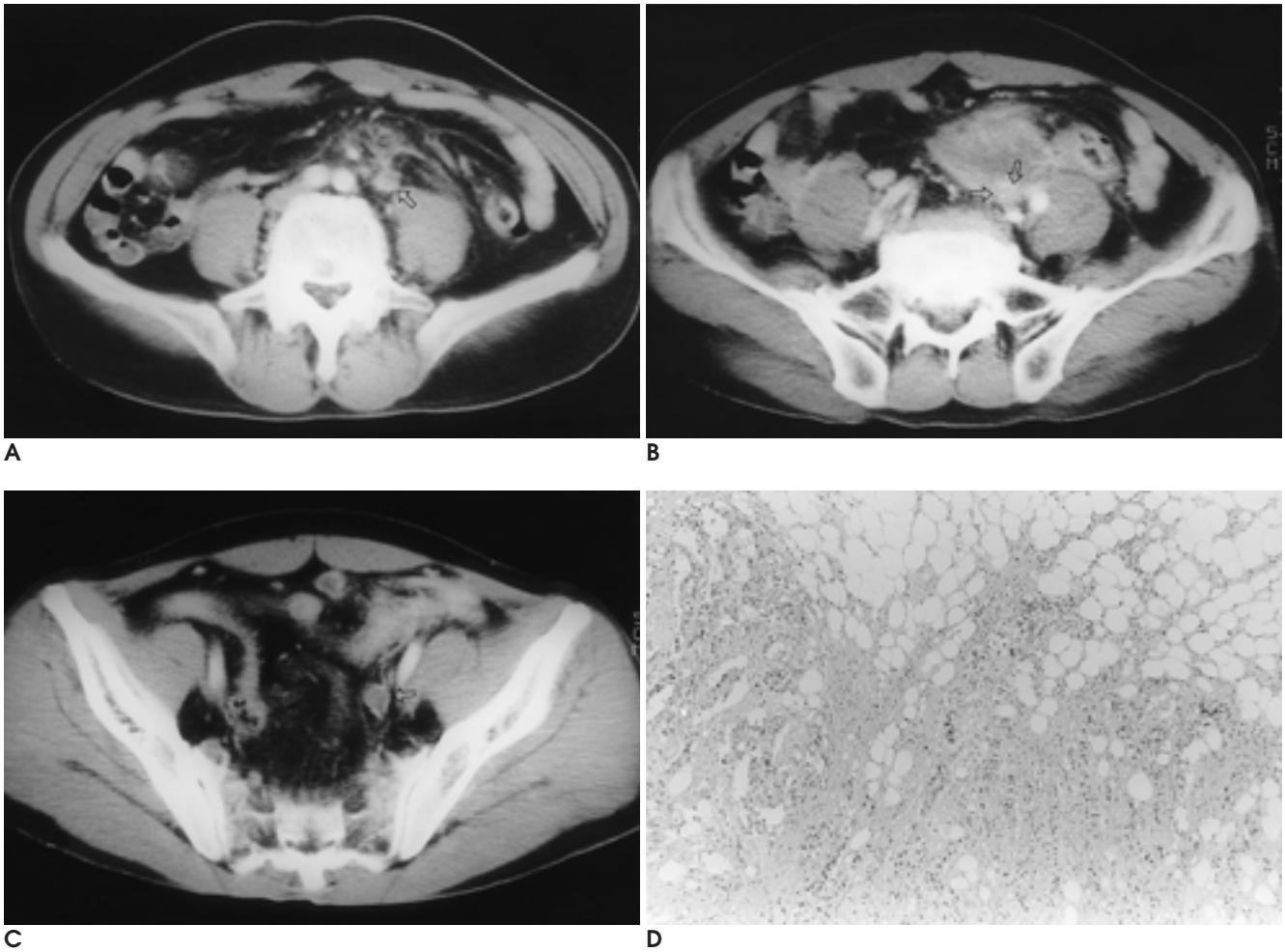

Fig. 1. Retroperitoneal mass due to exophytic growth of eccentric ureteral transitional cell carcinoma in a 55-year-old man. (A-C); Arterial phase of spiral CT.

A. At the aorta bifurcation level proximal to the mass, there are ureteral wall thickening and intraluminal soft tissue lesion within the ureteral lumen (arrow) with adjacent tumor infiltration.

B. At the common iliac artery level, lobulated soft tissue mass is noted. The ureter shows faint opacification and is engulfed by the tumor at the anterior margin (arrows). Psoas muscle and sigmoid colon are also invaded.

C. Distal to the tumor, soft tissue mass (arrow) is also seen in the distal ureter.

D. Photomicrograph of the histopathologic examination (H-E stain, 1×40) shows transitional cell carcinoma of the ureter penetrating the ureteral wall with exophytic periureteral mass formation.

metastasizes to the regional lymph nodes (5). The rich lymphatic network of the ureter and early ureteral obstruction by the tumor lead to enhanced lymphatic flow, and this may lead to early lymphatic metastasis (3), though in our case, pathologic exmination did not show that this had occurred.

Our preoperative impressions were primary retroperitoneal malignant tumors, such as leiomyosarcoma, malignant fibrous histiocytoma (MFH), or liposarcoma, which had invaded adjacent organs. The pathologic diagnosis, however, was an eccentric ureteral TCC which had penetrated the anterior ureteral wall to form an exophytic anterior periureteric mass.

In conclusion, we believe that exophytic TCC should be included in the differential diagnosis of a large retroperitoneal tumor, especially when a retroperitoneal mass is combined with an intraluminal ureteral soft tissue lesion and proximal and/or distal ureteral wall thickening.

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후복막강 종괴로 발현한 외장성 요관 이행성 세포암: 1예 보고[1]

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이행성 세포암은 요관의 가장 흔한 악성 종양으로 국소적 요관벽의 비후, 요관주위 침윤이나 인접한 림프절 종대를 동반한 강내 종괴로 나타난다. 후복막강의 종괴처럼 보이는, 외장성으로 자란 요관의 이행성상피세포암은 아직 문헌에 보고된 바가 없다. 이에 저자들은 병리소견 결과와 함께 컴퓨터단층촬영 소견을 보고하는 바이다.

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본논문은 과거에 출판된 적이 없으며 현재 타학술지에 제출되었거나 제출할 계획이 없다.

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