Case Report

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Ureteral Displacement due to Congenital Psoas Muscle Hypertrophy

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Key Words

Ureter, abnormal position

Psoas muscle hypertrophy, congenital

Abstract

We describe a patient with a laterally deviated ureter that was inappropriately diagnosed as a retroperitoneal mass before computed tomography was performed.

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Introduction

Discussion

Unilateral deviation of ureter due to congenital psoas muscle hypertrophy is very infrequent [1, 2]. In a study the incidence was reported as 12 in 8,200 [1]. Although there may be alterations in the ureteral course due to hypertrophy of the psoas muscle in athletic individuals, this kind of acquired condition usually involves both ureters [2, 3]. On the other hand, deviation of one ureter is very rare.

Case Report

A 59-year-old man was admitted to our hospital with a 2-year history of left dull lumbar pain. He had also suffered from weakness and fatigue.

Physical examination revealed no pathological finding. All parameters in the blood and urine were in normal limits and urine cultures were negative. Intravenous pyelography showed normally functioning kidneys, but a dramatically deviated left ureter. On computed tomography it was clearly seen that there was no retro-peritoneal mass and lateral deviation of the left ureter was due to hypertrophy of left psoas muscle (fig. 1, 2).

Unilateral ureteral deviation is an infrequent benign entity. Normally, the ureters course downwards parallel to the midline on the anterior surface of the psoas muscle and pass on to the ventral aspect of this muscle at the level of approximately L3 [3, 4]. This intimate relationship of the two structures will certainly explain course deviations of the ureter, and either medial or more frequently lateral deviation of the ureter may occur if there is psoas muscle hypertrophy [1, 4].

Enlarged lymph nodes, pyelectasis, abdominal aortic aneurysm, retroperitoneal tumors or fluid collections arising medial to the ureter, and central pelvic tumors such as uterine fibroid may cause lateral displacement of the ureter [1, 4]. Lateral deviation may occur due to psoas muscle hypertrophy at the level of L3-L5. In this case it is at the L4-L5 level. Although this benign entity can be recognized on the excretory urogram alone, evaluation by computed tomography is usually necessary [2, 4].

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Fig. 1. CT scan at the level of L4-L5. Left psoas muscle hypertrophy and lateral deviation of the left ureter is evident.

Fig. 2. Coronal reconstruction of the same patient.

References

Levine RB, Forrester D, Halpern M: Ureteral deviation due to iliopsoas hypertrophy. *AJR* 1969;107:756-759.

Haines JO, Kyaw MM: Anterolateral deviation of the ureters by psoas muscle hypertrophy. J Urol 1971;106:831–832.

Walsh PC, Gittes RF, Perlmutter AD, Stamey TA: Campbell's Urology. Philadelphia, Saunders, 1986.

Cunat SJ, Goldman SM: Extrinsic displacement of the ureter. Semin Roentgenol 1986;21:188–200.