Bilateral incomplete double ureters

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Keywords: double ureter; 3-dimensional CT urography

Case

A 43-year-old woman was referred to our hospital with complaints of recurrent frequency and lower abdominal discomfort. Her past history was notable for recurrent acute cystitis. Urinalysis showed normal findings. Intravenous urography revealed bilateral ureteric duplication. The right side was shown as partial ureteric duplication, while left side was complete ureteric duplication demonstrating double ureters throughout their entire course without union (Figure 1). However, 3-dimensional CT urography, reconstructed using 16-multidetector computed tomography (CT), demonstrated bilateral incomplete double ureters. The duplicated ureters on the right side joined at the upper proximal part of ureter and duplicated ureters on the left side, put together at just above the ureterovesical junction (Figure 2).

Discussion

Double ureter refers to the presence of two separate ipsilateral ureters. It presents complete or incomplete ureteric duplication. Bilateral double ureters are much more rare than ipsilateral double ureters. The ureteric orifices are characteristically inverted, in relation to the renal unit they drain. The ureter of the lower renal unit drains to the normal ureteric insertion, while the ureter of the upper renal unit drains ectopically [1]. Patients with double ureters may be accompanied by other ureteral anomalies such as ectopic ureter and have an increased risk of developing urinary tract infection, pain, hydronephrosis and stone formation [2]. As shown in this case, 3-dimensional CT urography helps us to clarify ureteric insertion or anomalies.

Conflict of interest statement. None declared.

References


Received for publication: 19.4.07
Accepted in revised form: 21.4.07

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Fig. 1. Intravenous urography shows bilateral ureteral duplications. Although right side is shown as incomplete form, left side is demonstrated as complete form by showing entire course of double ureters.

Fig. 2. Three-dimensional reconstructed computed tomography urography demonstrated that duplicated ureters on the right side joined at the upper proximal part of ureter and duplicated ureters on the left side put together just above the ureterovesical junction. RT, right; LT, left.