Clinical picture

Ureteropelvic duplication as focus of recurrent infection

A 60-year-old woman presented with intermittent fever and chill for months. Workup for her fever disclosed pyuria and bacteriuria, which responded after transient antibiotic use but soon recurred intermittently. Renal sonography showed bilateral mild hydrocalyces, without nephrolithiasis. An intravenous urography demonstrated right renal pelvic bifida and left ureteral duplication (Figure 1). Whole-body scan confirmed the increased uptake in bilateral kidneys (Figure 2). A prolonged course of trimethoprim–sulfamethoxazole was prescribed, and she received regular clinic follow-up in the ensuing months without fever recurrence.

Duplication of renal pelvicalyceal system is reported to occur in 5–10% of the general population, and unilateral pelvic bifida is the most common type.1 Ureteral duplication is less frequently found, with an estimated incidence of 0.5–1% in case series. These urologic anomalies stem from the early splitting of embryonic ureteral bud, and the division of metanephric tissues into two parts. The anomalous upper urinary tract connection at times may associate with ureteropelvic junction obstruction or vesicoureteral reflux,2 which potentially harbors the focus of recurrent urinary tract infection.

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References

Figure 2. Gallium SPECT-CT revealed diffuse intense uptake of bilateral kidney. Upper panels: non-contrast CT films; lower panels: radionuclide scan films.