Dear Sir,

We report a case of triplicate ureter on one side with duplicate ureter on the contra-lateral side in a healthy prospective renal transplant donor. A 43-year-old female was being evaluated as an elective renal donor for transplant. She had no symptoms regarding urinary tract pathology. Intravenous urography showed the right kidney with three pelvicalyceal systems and three ureters seen up to L5 with only one ureter seen in the pelvis. On the left side there were two pelvicalyceal systems with two ureters seen up to the urinary bladder (fig. 1 a, b). The patient had chance finding of five ureters. However, due to technical difficulties during transplant surgery, she was not accepted as a donor.

Triple ureter is one of the rarest anomalies of the upper urinary tract. It is reported to be associated with an increased incidence of congenital anomalies as well as a predisposition to infection and calculus formation. However, it may be an incidental finding causing no functional disturbance. Most investigators use the classification of Smith [1], who classified four varieties of triplicate ureter: (1) complete triplication – three ureters from the kidney with three draining orifices to the urinary bladder or ectopically; incomplete triplication – a bifid ureter with a single ureter, with three ureters from the kidney and two orifices draining below; trifid ureter – all three ureters unite and drain through a single orifice, and (4) two ureters from the kidney, one because of in-

Fig. 1. Excretory urograms at (a) 10 minutes and (b) 20 minutes showing three ureters, one on the right and two on the left side.

The embryologic basis of ureteric duplication has been explained by multiple ureteric buds independently arising from the Wolffian duct and/or early fission of one or more ureteric buds [4]. The case herein reported probably represents Smith’s second type of triplication.

In the majority of cases, diagnosis of triplication of the ureter is made when patients verse Y bifurcation, resulting in three draining orifices below. A unique case of ureteral triplication – a typical bifid system with a third, lateral ureter that appeared to communicate with the lower pole calyx has also been reported [2]. Ureteral triplication has been reported to
be associated with an increased incidence of congenital anomalies as well as a predisposition to infection and calculus.

References