CONGENITAL VAS DEFERENS ANOMALIES ARE EXTREMELY UNCOMMON [1]. Generally, these anomalies are known as absent, ectopic or atresic vas deferens [2]. Duplicated vas deferens have rarely been reported in the literature and are usually discovered during inguinal exploration [1,3]. Herein, we report a case of duplicated vas deferens detected during a varicocelectomy operation, and discuss it in the context of the relevant literature.

CASE PRESENTATION

A 19-year-old patient was admitted to our clinic with a 7-month history of testicular pain and scrotal discomfort. Family history was unremarkable. Bilateral grade 3 varicoceles were detected at physical examination. Bilateral vasa were palpable and the external genitalia of the patient was normal. Semen analysis revealed oligoasthenospermia. A bilateral varicocelectomy operation was decided upon, and bilateral inguinal microscopic varicocelectomy was performed. In the operation, two separate and completely developed vasa were noticed during the dissection of the left spermatic cord. Both were continuous at the level of the inguinal canal, and they were not cranially fused at the level of the internal inguinal ring (Figure). The right cord and vas deferens were normal. On ultrasonographic evaluation bilateral kidneys were normal.

DISCUSSION

Most common congenital anomalies are seen in skeletal muscle, skin, and the urogenital system in the human body. The most frequent genitourinary anomalies are renal, testicular and urethral. About 10% of the
population have genital or urinary system anomalies [2]. The overall incidence of vas deferens anomalies in the general population is estimated to be less than 0.05%, and these can be categorized as absence, ectopia, hypoplasia, and duplication [2,4]. Duplication of the vas deferens is a rare anomaly with only a few cases reported in the literature. Generally, duplication of the vas deferens is seen during inguinal surgical operations such as herniorrhaphy, vasectomy, and varicocelectomy, as in our case [1,3–5]. The coexistence of duplicated vas deferens and congenital abnormalities, such as ipsilateral renal agenesis, have been reported in the literature. The evaluation of the urinary system with ultrasonography was found to be normal in our patient.

The histogenesis of duplicated vas deferens is not clear. The epididymis, vas deferens, seminal vesicle, and ejaculatory ducts originate from the mesonephric duct [1,2]. The vas deferens develops from the central portion of the mesonephric duct and acquires a thick, muscular wall [2]. This central portion of the mesonephric duct is termed the proximal vas precursor. The proximal vas precursor occupies an intermediate position between the upper and common mesonephric ducts and differentiates into the vas deferens and seminal vesicles [1]. Duplication of the proximal vas precursor presumably gives rise to partial duplication of the vas deferens at the level of the inguinal canal [1,3].

As varicocelectomy is one of the most common surgical interventions in urology practice, the possibility of a duplicated vas deferens at the level of the inguinal canal should be kept in mind during varicocele operations to avoid inadvertent injury within the spermatic cord. Also, occurrence of this condition should not be forgotten during vasectomy operations.

**REFERENCES**