**Testicular Seminoma Incidentally Detected by Spermatic Cord Torsion**

Mi Mi Oh¹, Ji Sung Shim¹, Sun Tae Ahn¹, Tae Yong Park¹, Su Hwan Shin¹, Suk Cho¹, Sang Woo Kim¹, Jong Jin Park¹, Du Geon Moon¹,²

*Department of Urology, ¹Korea University School of Medicine and ²Korea University Institute of Regenerative Medicine, Seoul, Korea*

**Abstract**

We recently encountered a very rare case of torsion of an intrascrotal testicular tumor in a 26-year-old male. Unlike the intra-abdominal undescended testis, intrascrotal spermatic cord torsion associated with a testicular tumor has rarely been reported. We write to report a case of intrascrotal spermatic cord torsion accompanied by a testicular tumor that had been overlooked preoperatively.

**Key Words:** Spermatic cord torsion, Seminoma

Torsion usually occurs in the absence of a precipitating event, such as trauma.¹ Predisposing factors for testicular torsion are an increase of testicular volume, history of cryptorchidism, and testicular tumor.² Most reports of the spermatic cord torsion associated with testicular tumors, especially seminoma, are localized in the intra-abdominal testis. We report this rare case of intrascrotal spermatic cord torsion associated with an initially overlooked seminoma for the first time in South Korea.

**Case Report**

A twenty-six-year-old male patient was referred to the department of urology from the department of emergency medicine due to the abrupt onset of left scrotal pain and swelling. He had never noticed enlargement of scrotum before nor did he have a history of scrotal pain. On physical examination, the testis was enlarged with severe tenderness and the absence of the cremasteric reflex. On gray-scale sonography, the testicle showed heterogeneous echogenicity composed mainly of a hypoechoic lesion and enlargement of the epididymis (Fig. 1A, 1B). Doppler sonography revealed no blood flow. We decided to perform emergent detorsion. Upon detorsion, his pain was relieved and Doppler sonography showed a resumption of blood flow. The emergency operation planned was bilateral orchiopexy performed through a scrotal midline incision. In the operation room, the spermatic cord was edematous due to prolonged torsion and the enlarged testicle had bluish mass-like lesions in seminiferous tubules seen through the transparent tunica albuginea with an enlarged and congested epididymis (Fig. 2). Frozen pathological analysis of the bluish masses during operation revealed seminoma. An additional inguinal incision for an orchiectomy and the final pathological analysis was consistent with seminoma confined to the testis (Fig. 3). There was no evidence of distant metastasis on postoperative abdomino-pelvic
Fig. 1. (A) Gray-scale sonography showing heterogenous echogenicity combined with hypoechoic lesions within the parenchyma. (B) Round shape epididymis without blood flow on Doppler sonography.

Fig. 2. Bluish mass like lesions in seminiferous tubules transparently (white arrow) shown through albuginea with enlarged and congested epididymis (black arrow).

computed tomography. Alpha-feto-protein was 2.68 ng/ml and B-hcg was 2.70 mlU/ml. Although scrotal violation was noted, the patient refused further treatment and he is being closely monitored.

Discussion

Spermatic cord torsion is a well-known emergent condition that needs prompt restoration of blood flow by either manual detorsion or surgical exploration. The cryptorchid testicular tumor presenting with spermatic cord torsion is not a rare condition, as several cases have been reported. A few cases of testicular tumor associated with intrascrotal spermatic cord torsion have been reported, but this is the first case identified in South Korea. The most commonly used diagnostic

Fig. 3. (A) Hematoxylin and Eosin (H&E) stain revealed tumour cells with abundant clear to pale pink cytoplasm containing abundant glycogen with fibrous stromal network consistent with seminoma (×400). (B) Histopathology with H&E stain showing interstitial edema and hemorrhage at epididymis due to prolonged torsion (×100).
modalities are Doppler ultrasonography and radionuclide imaging, but a definite diagnosis can only be made by surgical exploration. We had overlooked the presence of seminoma in this case for several reasons. A typical sonographic finding of testicular torsion showed an enlarged testicle with heterogeneous echogenicity composed mainly of hypoechoic lesions within the parenchyma. Also, the seminoma, which are usually hypoechoic relative to the normal testis, had a nonspecific ultrasound appearance. Moreover, increases in testicular size can be seen in both testicular tumors and testicular torsion. Due to venous congestion, the affected testis may also appear larger than the unaffected testis, which may result in overlooking the coexistence of a testicular tumor, as in this case. From our point of view, the enlargement of the testicle can be a key factor for the differential diagnosis of possible concomitant testicular tumors. If we had been aware of the possibility of a concomitant testicular tumor, scrotal violation could have been avoided. The possibility of concomitant testicular tumor must be considered in patients suspected of spermatic cord torsion if an enlarged testicle with heterogeneous echogenicity is seen on gray-scale sonography.

REFERENCES

5) Prando D. Torsion of the spermatic cord: the main gray-scale and doppler sonographic signs. Abdom Imaging 2009;34:648-61