

CASE REPORT

Testicular torsion in spinal cord injury: a case report

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Study design: Case report.

Objective: To describe a case of testicular torsion in spinal cord injury (SCI).

Setting: Physical Medicine Rehabilitation Training and Research Hospital in Turkey.

Methods: We present the first case of testicular torsion in SCI along with its clinical presentation and follow-up results.

Results: Testicular torsion is a rare condition. No case was reported in people with SCI so far. The main difficulty in the diagnosis is that the nociceptive pain is below the injury level and the acute condition could be overlooked.

Conclusion: Testicular torsion is an acute condition for which early diagnosis is critical in the treatment. The case we describe adds new pitfalls in the diagnosis of this rare condition in people with SCI from the perspective of nociceptive pain below the injury level. *Spinal Cord* (2016) 54, 163–164; doi:10.1038/sc.2015.11; published online 14 July 2015

INTRODUCTION

Acute visceral pain diagnosis is one of the most difficult clinical presentations in spinal cord injury (SCI). Diagnosing an 'acute visceral pain' is one of the most important problems in people with SCI. People with SCI with neurological levels above T6 have altered the physiological responses and loss of sensory, motor and reflex functions.¹ Spinal cord below level mechanical/musculoskeletal pain occurs only in people with a neurologically incomplete SCI or with a sensory zone of partial preservation including the level of the pain.² Therefore, the presentation of an 'acute abdomen' in people with SCI may puzzle attending physicians and surgeons.¹ We present in this manuscript a case of testicular torsion in a person with SCI.

CASE REPORT

A 31-year-old man was admitted to the inpatient unit for rehabilitation 5 months after a motor vehicle crash injury. On admission he was conscious and was diagnosed as having a SCI. The history was taken and a full physical examination and routine laboratory work-up were performed. On the discharge summary of previous medical transcription report it was noted that the thoracic computed tomography (CT) and magnetic resonance imaging (MRI) performed on the day of the injury showed a T8–T9 vertebral body fracture. He underwent surgery on the day of the injury. He also had a rib fracture and pneumothorax and a chest drain had been inserted through the left chest wall. The chest drain was withdrawn 4 days after the injury. He was discharged 9 days after the injury to attend a rehabilitation program. After a rehabilitation program in another hospital, the patient was transferred to our hospital to continue the rehabilitation program. According to the International Standards for Neurological Classification of Spinal Cord Injury, the patient had a

complete lesion (American Spinal Injury Association Impairment Scale A (AIS A)) with a T7 neurologic level of injury. The upper extremity motor score was found to be 50 and the lower extremity motor score was 0. Total sensory loss below T7 level was present. During the rehabilitation program the patient reported urinary incontinence. Urine analysis was found to be positive for leukocytes and bacteria. The patient was diagnosed as having a urinary infection and had been treated with a third-generation cephalosporin for 7 days according to the urine culture. The control urinary culture had become sterile. On the 38th day of the rehabilitation program, patient had tremor and chest pain on the left side. The body temperature (36.7°C), oxygen saturation (97%), blood pressure (110/70 mm Hg) and blood glucose level were found to be normal. No abnormality was found on electrocardiography and abdominal physical examination. Chest pain was evaluated as neuropathic pain localized to the chest drain insertion site and pregabalin 75 mg was started for treatment. The chest pain disappeared following treatment. However, tremor, especially in the evening, continued at intervals. The results of control laboratory evaluation, including complete blood count, hemoglobin, hematocrit values and urinalysis, were found to be normal except for the high sedimentation rate, which was 85 mm/h. A chest X-ray showed no abnormality. Three days later, he developed swelling in the left scrotum. The scrotal ultrasound showed no blood flow to the left testis (Figures 1 and 2). Immediate surgical intervention including testicular detorsion was performed. During the surgery, all layers of scrotum and the spermatic cord were found to be edematous, the testicle was purple and there was almost 180° torsion. The testis was slightly pinked up after detorsion. Screening with intraoperative Doppler was not possible because of technical restrictions. On the first day of the surgery, the scrotal ultrasound showed no blood flow

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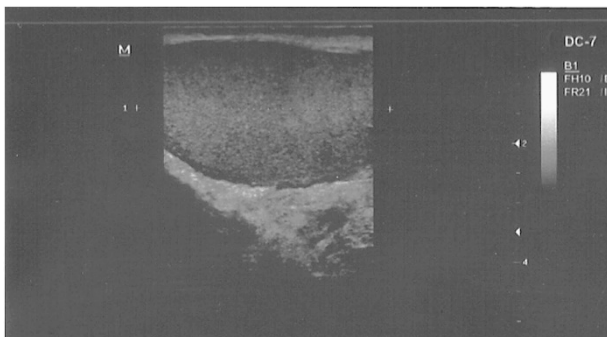


Figure 1 Gray-scale ultrasound image of the left testis, showing normal size but decreased parenchymal echo.

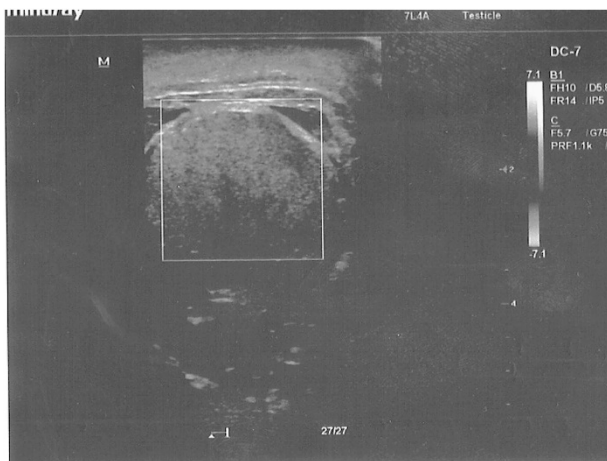


Figure 2 Left testicular color Doppler sonographic examination. No vascularization was detected in the left testis (torsion).

to the left testis. Intraoperative view of epididymis was remarkably edematous and inflamed most probably because of infection. It was also adhered to the testicle and surrounding tissues. Both epididymitis

and testicular torsion were present. Antibiotics were started after surgery. Swelling resolved after surgery and a clinical follow-up was planned by the surgeons. The testis was found to be atrophied on the repeat examinations. The patient was instructed about the importance to preserve the remaining testis at the time of surgery. Surgical fixation of the intact testis was recommended to the patient and planned in the near future.

DISCUSSION AND CONCLUSION

To our knowledge this is the first case report regarding testicular torsion in SCI. SCI below level nociceptive visceral pain in those with a neurologically complete injury level above T7 is characteristically vague and poorly localized. It may be associated with symptoms of autonomic dysreflexia, anorexia, altered bowel patterns, nausea or vomiting. The main difficulties in the diagnosis of this case were the completeness of the injury and the T7 level. As the injury level was T7, we did not observe the typical clinical presentation of autonomic dysreflexia, which could be expected to occur in people with SCI with the injury level above T6.²

On the other hand, as the injury was complete, the patient reported no pain below the injury level in the acute clinical presentation of testicular torsion.

We think this patient could be a typical case for complete SCI below level nociceptive pain with a rare clinical presentation. Close follow-up could be important and critical to make early diagnosis and appropriate treatment in acute visceral pain.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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