

Editorial referring to the paper published in this issue on pp. 352–356

TRAUMA AND RECONSTRUCTIVE UROLOGY

## We need to know the treatment of urethral of injuries

Thorsten H. Ecke

*Department of Urology, Helios Hospital, Bad Saarow, Germany*

Atom A Ter–Grigorian wrote an interesting review about urogenital disorders after pelvic ring injuries. This paper gives a good overview about many aspects of this problem. Though it is not extremely frequent [1], every urologist should have detailed knowledge about the treatment for all these cases.

The damage of the pelvic organs is often associated with the disturbance of integrity of the pelvic ring [2]. The most important risk factor of urogenital injuries is the rupture of the symphyseal joint [3, 4].

Much more frequent than injuries of the bladder are these of the urethra. EAU guidelines on urethral traumas should be followed [5]. Management of urethral injuries remains controversial due to the variety of injury patterns, associated injuries and treatment options. Though we know this fact, most urologists have little experience with these injuries and there is a lack of randomized prospective trials. The overview of the article from Ter–Grigorian can help to find a structure in the management of that difficult variety of treatments.

Injuries of the anterior urethra are mostly caused by blunt or penetrating trauma [6], placement of penile constriction bands, and iatrogenic injuries from instrumentation.

Injuries to the posterior urethra occur with pelvic fractures, mostly as a result of motor vehicle accidents [7]. Injuries vary from simple stretching (25%) to partial rupture (25%) to complete disruption (50%) [7].

Urethral injuries in women are rare. Urethral injuries in children are similar to those in adults, although injuries to the prostate and bladder neck may be more common [6, 7].

To find the diagnosis of acute urethral trauma the history always should be kept in mind. A pelvic fracture or any external penile or perineal trauma can suggest urethral trauma [8]. A high–riding prostate at digital rectal examination is an unreliable finding, but is nevertheless important to perform to exclude a concomitant rectal injury. In the absence of blood at the meatus or penile haematoma, urethral injury is very unlikely and can be excluded by catheterization. However, blood at the meatus is associated with urethral injury and urethral instrumentation should be avoided until the urethra is imaged [5].

In an unstable patient, it may be necessary to attempt to pass a urethral catheter. If there is any difficulty, a suprapubic catheter should be inserted under ultrasound guidance and a retrograde urethrogram performed later. In cases of successful urethral catheterization, the correct placement of the Foley balloon catheter inside the bladder must be checked radiographically or with ultrasound once the patient has been stabilized.

In penetrating injuries, the type of weapon used, including the calibre of the bullet, helps to assess potential tissue damage. In a conscious patient, a thorough voiding history should be obtained to establish the time of last urination, the force of the urinary stream, whether urination is painful and whether haematuria is present [5].

Anyway, in most cases the most secure way is a dynamic retrograde urethrography for evaluating urethral injury [9]. This important diagnostic should always be used if possible; it is still the gold standard for this severe problem [5].

### References

1. McGeady JB, Breyer BN. Current epidemiology of genitourinary trauma. *Urol Clin North Am.* 2013; 40: 323–334.
2. Hessmann M, Rickert M, Hofmann A, Rommens P, Buhl M. Outcome in Pelvic Ring Fractures. *Eur J Trauma Emerg Surg.* 2010; 36: 124–130.
3. Flint L, Cryer G. Pelvic fracture: the last 50 years. *J Trauma.* 2010; 69: 483–488.
4. Figler B, Hoffler Ed, Reisman W, Carney K, Moore T, Feliciano D. Multi-disciplinary update on pelvic fracture associated bladder and urethral injuries. *Injury.* 2012; 43: 1242–1249.

5. Martínez-Piñeiro L, Djakovic N, Plas E, Mor Y, Santucci RA, Serafetinidis E, Turkeri LN, Hohenfellner M. EAU Guidelines on Urethral Trauma. *Eur Urol.* 2010; 57: 791–803.
6. Koraitim MM. Posttraumatic posterior urethral strictures in children: a 20-year experience. *J Urol.* 1997; 157: 641–645.
7. Koraitim MM, Marzouk ME, Atta MA, Orabi SS. Risk factors and mechanism of urethral injury in pelvic fractures. *Br J Urol.* 1996; 77: 876–880.
8. Armenakas NA, McAninch JW. Acute anterior urethral injuries: diagnosis and initial management. In: McAninch JW, editor. *Traumatic and reconstructive urology.* Philadelphia, PA: WB Saunders; 1996. pp. 543–550.
9. Colapinto V. Trauma to the pelvis: urethral injury. *Clin Ortho Rel Res.* 1980; 151: 46–55. ■

**Correspondence**

Dr. habil. Thorsten H. Ecke, Priv.-Doz.  
thorsten.ecke@helios-kliniken.de