The classifications indicated in Elbakry’s article are based on clinical evaluations and investigations carried out at the time of the pelvic trauma. Therefore, they might be useful in the choice of the initial management of the trauma, which currently provides the only immediate recourse to surgery for the repair of the bladder or rectal injury. Attempting endoscopic re-canalisation is justified only in stabilised patients and in the presence of adequate instrumentation and expertise. Otherwise, the drainage of urine through the simple suprapubic cystostomy in critical patients is the manoeuvre that protects it from further damage. These three steps summarise the current guidelines for posterior urethral trauma, the philosophy of which is to avoid inappropriate manoeuvres (e.g. through clumsy attempts at urethral catheterisation or endoscopic/surgical re-canalisation) and therefore reduce the risk of causing damage to the residual sphincter or to the nervous structures of erection at the time of initial management of the trauma [1].

We must consider that the initial management of trauma is often in peripheral non-specialised centres, where the first goal is to save the life of the patient. Often, these centres are not equipped to conduct urethrography adequately enough to allow proper classification of the lesion.

After some months, the patient arrives in the specialised centre for the repair of the sequelae of the trauma, represented mainly by the posterior urethral stricture. It is often extremely difficult to reconstruct the exact history of the initial trauma management. Accordingly, it is also difficult to define the classification of the initial injury. In addition, we do not know what manoeuvres, potentially harmful to the sphincter apparatus, have been carried out beforehand. So at this point, the anatomical situation of the actual lesion has changed and needs to be re-evaluated. The radiological and endoscopic re-evaluation is aimed to define:

1. The location and length of stenosis.
2. The function of the bladder neck.
3. The conditions of the anterior urethra.
4. Any associated lesions (e.g. urethrorectal fistula, etc.).

This assessment helps to clarify with the patient:

(i) The appropriate therapeutic strategy: For example, in case of non-obliterative stenosis combined with maintenance of erectile function after injury, the patient might opt for endoscopic attempts to stabilise the urethral patency.

(ii) The target of the urethroplasty: For example, in a patient with an incompetent bladder neck, the only target will be urethral re-canalisation, which will be followed by inevitable incontinence, of which the patient must be well informed.

(iii) The degree of difficulty of the operation: A long and/or high stenosis implies a more difficult operation, with increased risk of tension on the anastomotic repair or an indication of other types of urethral repair.

In this sense, the studies of Koraitim [2,3] on gapometry try to provide a response before surgery to the difficulties that the surgeon will find at the time of the surgery, and to try to plan the type of intervention.

Other authors have proposed the use of MRI to optimise the preoperative evaluation of urethral lesions, and thus facilitate the definition of their classification [4,5]. In reality, currently, a well-made combined retrograde and voiding cysto-urethrogram remains the best way to obtain sufficient
information. However, often the intraoperative path of the repair could prove to be more unpredictable than what has been estimated by the preoperative evaluation.

The current reconstructive techniques are characterised above all by the use of an elaborate progressive perineal approach, which, progressing through additional steps (urethral mobilisation, corporal body separation, inferior pubectomy and retrocrural urethral re-routing) allows bridging both short and long or complex urethral defects, and therefore repairs most of the stenoses [6].

Differently, it is possible to resort to the use of other surgical options (e.g. combined abdomino-perineal approach, staged techniques, etc.) for the repair of the more complex stenoses [7,8].

So, overall, experienced surgeons rely on their ability and competence in dealing with the intervention, rather than on the preoperative classification of the lesion [9]. However, an attempt to simplify the classification of delayed lesions in non-complex (e.g. non-obliterative stenoses) and complex urethral injuries (e.g. long defects, or associated with incompetent bladder neck or urethrorectal fistulae, etc.) could be useful in providing the clearest idea about what can be expected at the time of surgery, and to inform the patient adequately.

Finally, there is controversy about the terminology. The term 'posterior urethral distraction defects' might not be accurate, because all distractions are injuries but not all injuries are necessarily distractions. Thus, perhaps the use of the term 'traumatic posterior urethral injuries' might help to provide a uniform nomenclature.

References

[1] Chapple C, Barbagli G, Jordan G, Mundy AR, Rodrigues-Netto V, Pansadoros V, et al. Consensus statement on urethral trauma. BJU Int 2004;93:1195–202.

[2] Koraitim MM. Gapometry and anterior urethrometry in the repair of posterior urethral defects. J Urol 2008;179:1879–81.

[3] Koraitim MM. Predictors of surgical approach to repair pelvic fracture urethral distraction defects. J Urol 2009;182:1435–9.

[4] Oh MM, Jin MH, Sung DJ, Yoon DK, Kim JJ, Moon du G. Magnetic resonance urography to assess obliterator posterior urethral stricture: comparison to conventional retrograde urethrography with voiding cystourethrography. J Urol 2010;183:603–7.

[5] El-Ghar MA, Osman Y, Elbahi E, Refaee H, El-Diasty T. MR urethrogram versus combined retrograde urethrogram and sonourethrography in diagnosis of urethral stricture. Eur J Radiol 2010;74:193–8.

[6] Webster GD, Ramon J. Repair of pelvic fracture posterior urethral defects using an elaborated perineal approach: experience with 74 cases. J Urol 1991;145:145:744–8.

[7] Pratap A, Agrawal CS, Pandit RK, Sapkota G, Anchal N. Factors contributing to a successful outcome of combined abdominal transpubic perineal urethroplasty for complex posterior urethral disruptions. J Urol 2006;176:2514–7.

[8] Cooperberg MR, McAninch JW, Alsikafi NF, Elliott SP. Urethral reconstruction for traumatic posterior urethral disruption. outcome of a 25-year experience. J Urol 2007;178:2006–10.

[9] Andrich DE, O’Malley KJ, Summerton DJ, Greenwell TJ, Mundy AR. The type of urethroplasty for a pelvic fracture urethral distraction defect cannot be predicted preoperatively. J Urol 2003;170:464–7.

Enzo Palminteri  
Centre of Urethral and Genital Reconstruction, Via Frá Guittone 2, 52100 Arezzo, Italy  
E-mail address: enzo.palminteri@inwind.it

Ferdinando Fusco  
Department of Urology, University Federico II, Naples, Italy  
Available online 2 August 2011