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TRAUMA AND RECONSTRUCTIVE UROLOGY

Urological implications of pelvic trauma

Cristian Persu

Carol Davila University of Medicine, Bucharest, Romania

Pelvic trauma is a complex condition with lesions that might extend to the peritoneal organs, spinal cord or adjacent bones. Causes of trauma in this region are diverse, with various degrees of incidence corresponding to different geographical areas – traffic accidents tend to be more common in Western countries, while military conflicts are responsible for more traumas in war regions. Other possible causes include domestic or work-related incidents or accidents.

While trauma of pelvis is a generic term, the impact on the pelvic organs, namely the urogenital system, is a serious condition, with potential lethal risk.

The authors of the paper present the results of a comprehensive research activity, based on reviewing English language papers indexed on Medline.

One interesting aspect is that men have a twofold risk of pelvic organ lesions compared to females, and that age is not a risk factor by itself. The lesion of the bony pelvis is also not a prognostic factor for the evolution of the patient, although the lesion of one or more urogenital organs virtually doubles the death risk.

It seems reasonable to believe that the extent of the lesion of the skeletal pelvis determines the extent of the visceral lesions, and this review underlines the mainstay role of the symphyseal joint as the most important risk factor for severe organ trauma.

The incidence of urinary organ lesions after pelvic trauma ranges from 25 to 30%, with the bladder and urethra accounting for most cases. The diagnosis of the lesion is based on either imaging or surgical exploration. Urethral damage is proven to be rare after pelvic trauma, with a higher incidence in men compared to women. The localization and extent of the lesion on the pelvic bones is correlated with the risk of urethral lesions, and this has to be kept in mind when performing the assessment of the patient. One important conclusion of the authors is that clinical evaluation could be enough to rule out urethral lesions but, in case of any suspicion, a retrograde urethrography must be carried out before any other maneuver, such as catheterization. CT and MRI have limited use for evaluating urethral lesions.

The available data suggests that CT scanning is the most valuable tool for assessing the extent of the lesions. Anyhow, we need to keep in mind that in many countries or hospitals, the CT scan might not be available anytime or even at all. In such cases, *traditional* radiology, namely retrograde cystography or IVP are the options of choice. Keeping in mind the emergency aspect of any urological trauma, we consider that the best imaging test is the one that is readily available, and that test should be used at once, instead of waiting for more advanced tests, which might become available in hours or even days. Even if the initial evaluation was negative for urogenital lesions, clinical experience suggests that if surgical exploration is required by the orthopedist or traumatologist, a urologist should be part of the surgical team. In many cases, when imaging is negative but the condition of the patient worsens, surgical exploration is imposed as a rapid diagnostic and therapeutic procedure.

Another aspect that has to be assessed as part of the initial evaluation of a traumatized patient is neurological damage, which is considered by some authors to be responsible for many dysfunctions, especially when the extent of visceral lesions are limited.

Data acquired by the authors suggests that urodynamics carry an important role in the evaluation protocol for these patients, due to the ability to detect the signs of a neurogenic bladder. Although the role of urodynamics is undoubtful, their place in the early follow-up of the patient might be questioned. First, there is a matter of availability, and it is well known that many centers, even large ones, lack the ability to perform urodynamic tests. Then, there is the idea of performing urodynamics shortly after an intervention on the lower urinary tract, which is also questionable.

In the long run, urinary incontinence and erectile dysfunction have significantly higher incidence rates compared to similar populations without pelvic trauma, and this aspect should be discussed with the patient, as this becomes the most important factor to decrease the quality of life. Some authors consider

that the IIEF questionnaire should be applied to all patients in the follow-up after pelvic trauma, in order to identify as early as possible those who need further treatment.

The paper brings to our attention a shift of paradigm in contemporary urology, similar to the one encountered in SCI patients – decades ago, medical success meant only survival; nowadays, we speak about improving quality of life and reducing the long term impact of a major accident. The authors of

this paper did an excellent job collecting and analyzing data in a field generally marked by a lack of long term reports, providing useful details and relevant evidence that become useful, especially for those doctors who do not treat trauma patients routinely.

Correspondence

Dr. Cristian Persu
cpersu@clicknet.ro