

Addressing the barriers to optimal management of penile fracture

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Cite as: *Can Urol Assoc J* 2013;7(7-8):258-9. <http://dx.doi.org/10.5489/auaj.1560>
Published online August 19, 2013.

Immediate surgical repair is the standard of care and is superior to non-operative management for penile fracture. Nason and colleagues add supportive evidence to conclusions based on more than a dozen series: prompt repair of the corpora is associated with far fewer complications following penile injury, most notably erectile dysfunction and penile deformity, and there is little to no role for delaying intervention or observation in these cases.^{1,2}

In cases where patient presentation is delayed, the question of surgical treatment benefit versus observation has repeatedly been raised. While I was working under Dr. Tom Lue at the University of San Francisco in 2005 (AB), penile fractures were repaired acutely up to 10 days after injury, and recent series have demonstrated the utility of this approach including el-Assmy and colleagues' study with 180 cases.³ In the el-Assmy data set, 31 patients with delayed repair (more than 24 hours after injury, ranging from 30 hours to 7 days) had equivalent outcomes based upon rigorous follow-up using validated metrics compared to the 149 men who underwent repair promptly after injury.³ Morey offers the clinical opinion that data, such as these, offer the option for those with busy operative schedules accepting cases of suspected penile fracture: "We can admit, image and stabilize them during a several day period before elective repair."⁴ Immediate/early repair is preferable, but in cases where patient factors or logistics preclude this approach, the tangible benefit of surgical repair does not automatically alter the clinical pathway to observation.

Barriers to care most notably include diagnosis and access to a urologic surgeon able to perform the repair. Diagnosis of fracture is in most cases by history. In equivocal cases,

high-resolution penile ultrasound often can identify the exact location of the tear, which in turn allows the surgeon to plan the incision to be used more accurately.⁵ Practically, a negative exploration for presumed penile fracture does occur infrequently in the absence of imaging availability; rupture of the deep or superficial dorsal vein or of the deep dorsal artery of the penis may mimic penile fracture and can usually be identified with ultrasound (or in exceptional cases magnetic resonance imaging). Lack of imaging availability should not delay operative exploration and management.⁶

From the surgeon's standpoint, the key is to establish exposure and identify the fracture site, ligate bleeding vessels, and repair the albuginea tear and any associated urethral rupture, along with evacuation of hematomas.⁶ This decreases the rates of potential sequelae of erectile dysfunction, tunical and corporal scar tissue, deformity and pseudoaneurysm of the corpora. Although the circumcision incision with degloving is the most familiar approach for most urologists, most fractures are located ventrolaterally in the proximal shaft and exposure of the fracture site can be either through a small longitudinal incision placed directly over the fracture site or a ventral incision over the urethra.⁵ Closure of the tunica with non-absorbable sutures is unnecessary, and as in the case of penile implant reconstruction, using a 2-0 absorbable Vicryl suture or analogue is preferred.

For the urologist on-call, penile fracture is considered a urological emergency with or without concomitant injury to the penile urethra.⁶ Diagnostic and technical barriers are minimal, with exploration and repair supported by contemporary literature. There is little role for "definitive" conservative or non-surgical management. Recent data also support surgical intervention for patients with delayed presentation.

Finally, many urologists have not operated acutely on the penis since their training, while others perform penile surgery on a regular basis. Although delaying operative intervention may make surgery more complex due to larger

hematoma and increased tissue plane deformities, it seems reasonable based on several studies to delay operative management until the next day and have a more suitable colleague offer surgical intervention if this is in the patient's best interest.

Competing interests: None declared.

This paper has been peer-reviewed.

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