# Flank Hernia Repair After Penetrating Abdominal Wall Trauma

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## Background

- Flank hernias due to trauma are rare and challenging, but are more common than was previously recognized.[1]
- There is a lack of consensus on the surgical management of flank hernias in trauma.[1]
- The majority of studies on flank hernias are in the setting of blunt abdominal trauma, however, there exists a paucity of literature in penetrating trauma.[1]
- There is a developing school of thought in traumatic hernias that supports delaying surgical intervention until symptomatic.[2]

## Case Description

We present a case report of a 39-year old male with a persistent left flank hernia after sustaining a penetrating abdominal wall trauma with a tree branch two years prior, and with multiple subsequent reconstructive surgeries including both open and minimally invasive approaches.

- Brought in by ambulance after car vs. tree collision. Tree branch fell through his windshield, impaled him through the abdomen causing evisceration of his bowels, degloving genital injury, right 1st digit, and left thigh laceration (fig. 1)
- On admission, GCS 15 hemodynamically stable, brought emergently to the OR and found to have left colon injury.
- Over 1-month underwent thigh washout, urologic repair and underwent left colectomy, abdominal wall reconstruction with strattice mesh (fig. 2)

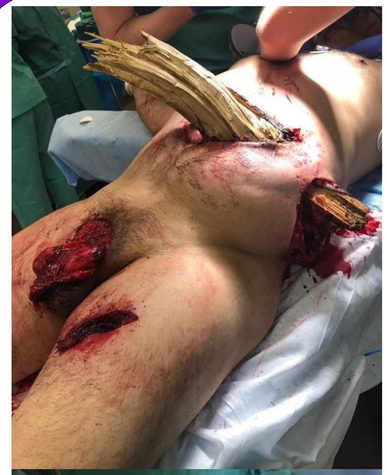


Figure. 1
Initial penetrating injury with tree branch fragment, degloving penis injury, large left thigh laceration



Figure. 2
Initial abdominal wall reconstruction with strattice mesh



Figure. 4
Final outcome of multiple open and minimally invasive surgical repairs



Figure 3.
Robotic hernia repair at 18-months

## Case Description (cont.)

- 6-months post discharge, symptomatic with enlarging left flank hernia, brought electively to OR for fascial defect repair, suture-buttressed with overlay synthetic mesh
- 12-months post discharge, recurrence of left flank hernia, underwent robotic incisional hernia repair with additional overlay synthetic mesh
- 18-months post discharge, recurrence of left flank hernia, underwent additional robotic hernia repair, defects closed and diastases plicated and mesh from prior repaired from left flank across to right rectus (fig. 3)
- 22-months post discharge, asymptomatic at follow-up, no evidence of recurrence to date (fig. 4)

## Discussion

This case demonstrates the complexities of the traumatic flank hernia repair. Flank hernia repair is most commonly accomplished via mesh, can be done either open or minimally invasive, and may be done either at the time of trauma or delayed to a later time.[1] Early detection and appropriately timed intervention remain paramount to positive outcomes.[3] There is a developing school of thought that supports early non-operative management of traumatic hernias, and delaying surgical intervention when only symptomatic, as was the successful case in this patient.[2]

**References**

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**Disclosures**

The authors declare that they have no relevant or material financial interests that relate to the research described in this poster