Asymptomatic Type 6 Morel-Lavallée Lesion (MLL) with Subsequent Pelvic Acid-Fast Bacilli Infection after trauma from Motor Vehicle Accident: A Case Report

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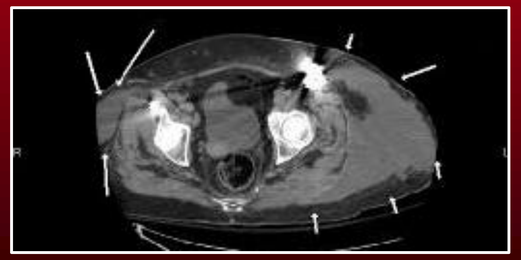
PATIENT CASE

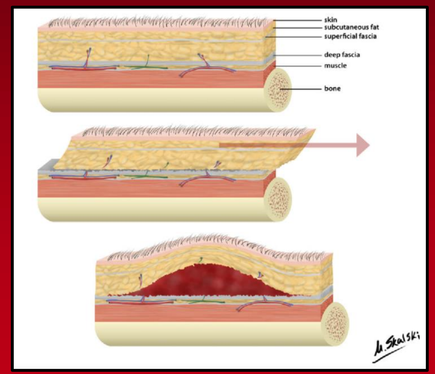
66 yo F with multiple sacral and pelvic fractures after pedestrian vs. car. She underwent surgical repair and later transferred to acute rehabilitation. She had overlying eschar for two weeks, with stable vital signs and labs, & participated with therapies. On Rehab admission day 9, worsening right hip pain, prompted x-rays, unchanged from previous. On rehab day 15, altered mental status & foul-smelling left hip drainage prompted infectious workup and transfer to acute care.

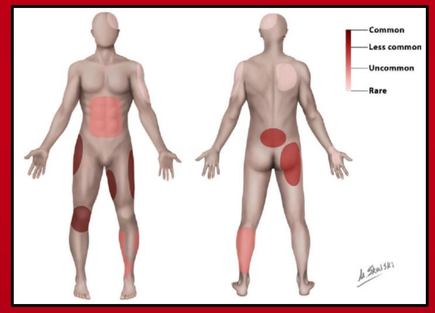
RESULTS – Rehab Day 15 (Post-Injury Day 30)

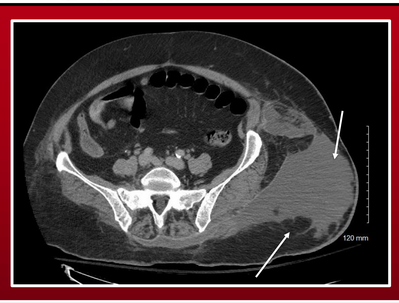
WBC 4.5 (normal), Lactic Acid 1.6 (normal)
ESR 140 (high)
Wound culture: Pseudomonas aeruginosa, and Enterococcus faecalis

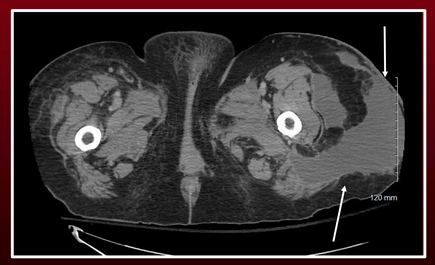
CT Pelvis showed a large organizing superficial fluid collection in left sacral, gluteal, trochanteric area which extends along the lateral aspect of proximal thigh, with largest axial diameter 17.2 x 10.5 cm. This is a **sizeable degloving injury (Morel Lavallee lesion).** Additionally, there is a smaller fluid collection, on the right side superficial to the gluteal muscles at the level of the hip/acetabulum.











WHAT ARE MLLs?

- Post-traumatic soft tissue closed degloving injuries, created from shearing forces that separate skin, & subcutaneous fat from underlying fascia, disrupting the vessels & nerves, & filling fill with blood, lymph, debris, & fat.
- Usually found adjacent to osseous protuberances, like the greater trochanter, flank, buttock, & lumbar spine.
- Six types, based on involvement & chronicity -> dictates severity & treatment

Type I	Type II	Type III	Type IV	Type V	Type VI
Seroma	Subacute Hematoma	Chronic Organizing Hematoma	Closed Laceration	Pseudo-nodular	Infected

Presentation:

- Usually symptomatic, with pain, stiffness, swelling
- Soft-fluctuant area of contour deformity
- +/- Skin discoloration, decreased sensation or skin necrosis
- Hours-days after trauma; although 1/3 occur months-years after trauma

Diagnostics:

- No lab markers
- X-ray: non-specific & variable; may reveal an-, hypo- or hyperechoic non-calcified soft tissue mass
- US: may show fluid & fatty tissue collection; heterogeneous if acute, and homogenous if chronic
- MRI: gold-standard; well-defined oval, fusiform, or crescenteric shape, w/ possible tapering

CASE CONTINUED

Patient underwent multiple irrigations & debridements of the left thigh large purulent material. She had removal of anterior pelvic hardware & placement of wound VAC.

Post Injury Day 31 - Intraoperative cultures & bone battery +Enterobacter Cloacae, E. coli and Enterococcus cloacae

Post Injury Day 39 - intraoperative cultures +positive acid-fast bacilli

Completed prolonged IV antibiotics w/ PICC

WHY IS THIS CASE UNIQUE?

- Asymptomatic for two weeks, other than contralateral hip pain
- No change in overlying skin from baseline road rash & eschar
- Presence of acid-fast infection
- MLL Type VI, rarer than Types I-III
- Case illustrates the importance of early suspicion, workup, & clinical diagnosis for prompt initiation of treatment

FUTURE PRACTICE THOUGHTS

- MLL is rare; keep the diagnosis in mind with traumatic injuries, especially pelvic injuries.
- Always monitor the skin! Constant surveillance of traumatic skin lesions may serve as a potential indicator to request a more specific image earlier, like CT or bedside US.
- Lab markers are not useful to diagnose MLL.
- Earl community with the surgical team is essential to prevent further disability when suspecting MLL.

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