

Morel-Lavallée Lesion

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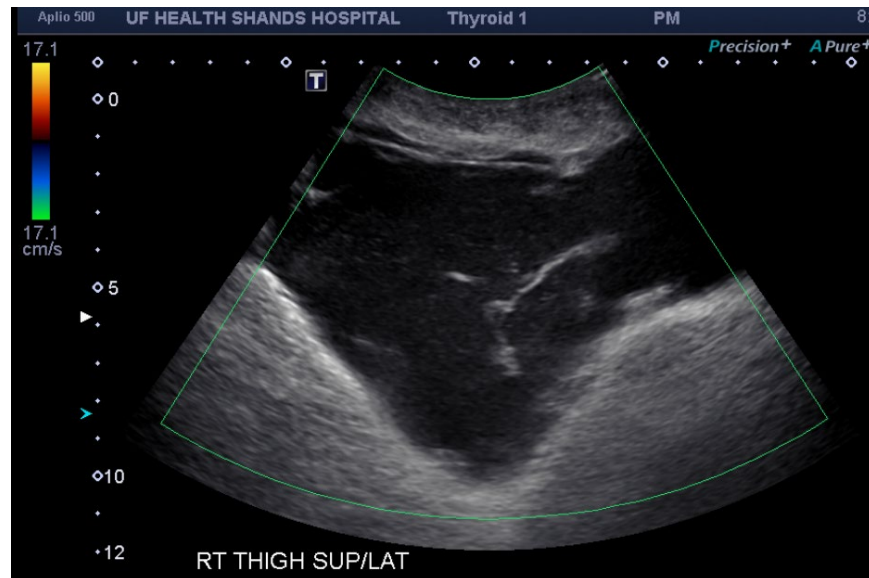
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History of present illness: A 17-year-old male presented to the emergency department for significant localized right lower extremity (RLE) swelling following a motorcycle traffic accident 12 days prior, causing high-impact blunt trauma to his RLE and included multiple orthopedic fractures on the initial date of injury.

Significant findings: On physical examination, he was noted to have a nearly “watermelon-sized” fluctuant mass to his right lateral superior quadriceps with multiple overlying abrasions (Image 1). Computed tomography (CT) scans of the area showed a large heterogeneous collection measuring roughly 37x9.5x16 centimeters in the subcutaneous adipose layer of the lateral right thigh (Image 2), while ultrasonography revealed a complex fluid collection containing some nodular solid components and debris (Image 3). Additionally, radiographs confirmed multiple fractures including most significantly a pelvic ring fracture. Surgical debridement, evacuation, and sclerodhesis were performed nine weeks post injury to allow overlying abrasions to heal prior to intervention.

Discussion: Morel-Lavallée lesions (MLL) are a rare internal degloving injury involving the traumatic separation of the mobile subcutaneous tissue from the immobile underlying fascia, allowing for hemolymph to develop in the closed potential space.¹⁻³ Morel-Lavallée lesion was initially used to refer to regions involving the trochanteric region,¹ first reported by Maurice Morel-Lavallée in 1863,⁴ but now includes various anatomical locations of varying relative incidence.² Clinical manifestations can be inconsistent, though the hallmark physical finding is a soft fluctuant area due to fluid collection,^{1,3} with motor vehicle collisions comprising the most common mechanism. Onset typically occurs within hours to days, but in up to one third of cases, onset is delayed by up to several months.⁵ No established standard of care yet exists, but management algorithms have been suggested.^{2,6} A recent meta-analysis suggests that MLL cases involving peri-pelvic fractures are best managed surgically with open debridement and sclerodhesis, as compared to conservative management.³

Topics: Morel-Lavallée lesion, internal degloving, emergency medicine, pediatrics, trauma, orthopedics.

References:

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