

Beyond bruising: diagnosing the underdiagnosed Morel-Lavallée lesion with point-of-care ultrasound in blunt trauma

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Introduction:

Morel-Lavallée lesions are rare, closed traumatic degloving soft tissue injuries caused by blunt trauma. They result from the shearing force that separates the dermis from the underlying fascia. A high index of suspicion is required, as missed diagnoses can lead to complications such as infection, pressure necrosis, pseudocyst formation, and chronic fluid collections.

Case Presentation:

A 48-year-old patient reattended the emergency department with complaints of left leg swelling and bruising, following a fall from a horse 2 weeks prior. She had sustained injuries to the left leg. At her initial presentation, a computed tomography scan from head to pelvis, along with X-rays of the left femur, was performed. No acute fractures or visceral injuries were identified. However, over the next 2 weeks, she developed progressive swelling and bruising of the left thigh.

On examination, there was ecchymosis of the left lateral thigh, along with a large, fluctuant swelling on the anterolateral aspect of the left thigh, extending from the groin to the suprapatellar region. Sensory examination of the thigh was normal, and the limb remained neurovascularly intact distally.

Point-of-care ultrasound of the thigh revealed extensive hypoechoic fluid collections above the muscular fascial planes, with internal debris suggestive of fat globules and no fluid-fluid levels. These findings were concerning for a Morel-Lavallée lesion. The patient was discussed with the plastic surgery team, who recommended magnetic resonance imaging (MRI) of the thigh. MRI confirmed the diagnosis, and the patient was admitted for open debridement and irrigation.

Conclusion:

Ecchymosis, fluctuance, skin hypermobility, and swelling, particularly over bony prominences following high-energy blunt trauma, should raise suspicion for Morel-Lavallée lesions. Point-of-care ultrasound is a fast, reliable, cost-effective, and readily available tool for emergency physicians to aid in their diagnosis. Prompt recognition can reduce missed cases and associated complications.