

Morel-Lavallee Lesion: A Case Study and Insight from a Teenage Patient and Nurse Mom

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Objectives:

- Define and explain the Morel Lavallee lesion related to trauma and comparison of a traumatic seroma.
- Identify the emotional and physical implications of wound management
- Develop an understanding of the significance of physical therapy and the desired outcome after a skin graft.

What is a Morel-Lavallee Lesion?

Definition: A closed degloving injury resulting from shearing forces that separate the skin, including disruption of capillaries and lymphatics, and subcutaneous tissues from the underlying fascia.

Mechanism: Typically caused by high-energy, blunt force trauma or crush injuries.

Common Locations: Thigh, hip, and pelvic regions.

(Singh R, Rymer B, Youssef B, Lim J 2018)

Signs and Symptoms:

- Presents as an enlarging and tender area with associated pain and tightness
- Decreased skin sensation
- Increased skin mobility

Complications:

- Occur as a result of delayed or incorrect diagnosis
- Progressive expansion of untreated lesions can cause pressure necrosis of overlying skin

(Scolaro, J. , Chao, T. & Zamorano, D.2016)

Morel Lavellee Lesion vs Post Traumatic Seroma

	Morel Lavellee Lesion	Post Traumatic Seroma
Cause	Closed Degloving injury due to trauma	Fluid accumulation after surgery or injury
Trauma type	High energy blunt trauma	Less severe trauma or surgery related
Fluid	Serosanguinous fluid	Serous fluid
Location	Subcutaneous fat and deep fascia separation	Typically, around surgical sites or areas of injury
Mechanism	Shear force separating skin, lymph and capillaries from fascia	Fluid accumulation in created space

Case study:

- 13yo boy driving ATV down a hill
- ATV Over-turned landing on left leg
- He freed himself from under the ATV prior to help arriving
- No pain
- Normal mobility
- c/o numbness to thigh area
- Minimal bruising to area noted

24 Hours Post injury:

- Significant bruising to thigh.
- Area remains numb
- No complaints of pain, other than “soreness” and “tightness”
- Full range of motion
- Managed injury at home~ wrapped and elevated

Post Injury Day #8

- Significant fluid accumulation noted in knee and lower leg
- Extended bruising to lower leg and toes
- Concern for darker area in center of thigh
- Thigh area remains numb
- Mobility is more challenging

Post Injury Day #15

- c/o “achiness” and “chilling”
- Concern with “blackened” area in thigh wound
- No Fever
- No Pain
- Taken to the ED
- PO antibiotics
- Sent home per request of Patient and family

Post Injury Day #16

- Mentation was “off”
- Developed low grade Fever
- Returned to the ED
- Elevated WBC count
- CT of left leg rendered a large “Morel Lavallee Lesion”
 - Formed fluid collection measuring 12.0 x 12.0 x 35 cm
- Plastics team consulted
- Plan for admission and OR

Post Injury Day #17

- To the OR ~ removed 1.5 liters of fluid from his left leg
- Excised and debrided thigh wound ~ 20 x 15 cm
- Two Jackson Pratt Drains placed
- Wound Vac placed

Wound Management

- First Post Op vac dressing change
- Good seal
- Adequate pain management

Post Injury Day #22

Post Operation Day #7

- Physical Therapy ongoing
- Learning to manage the portable vac and drains while ambulating
- Transitioned to PO antibiotics
- Minimal pain
- Good spirits
- *Discharged home!* with home health services for wound vac management

Home Care:

- Visiting Nurses assisting with vac dressings and assessment of wound
- “MacGyver-ing” the vac dressing when necessary
- Wound Supply management
- Learning mobility restrictions
- Importance of mindset

Hospitalization for Skin Graft Management

- Admitted x4 days
- Bed rest x3 days
- Bowel regimen
- Diet structure
- Emotional implications

Lessons Learned....

- Emotional aspects of the injury and healing process:
 - Sharing examples of success
 - Encouraging discussion about fears
 - Allowing him to engage in the wound management
 - The ability to share his story
 - Taking photos to show improvement
- Overcoming Physical limitations and the importance of ongoing PT:
 - Start slow and continue to build
 - Develop a routine

References:

Scolaro, J. , Chao, T. & Zamorano, D. (2016). The Morel-Lavallée Lesion: Diagnosis and Management. *Journal of the American Academy of Orthopaedic Surgeons*, 24 (10), 667-672. doi: 10.5435/JAAOS-D-15-00181.

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Yang Y, Tang TT. The Morel-Lavallée Lesion: Review and Update on Diagnosis and Management. *Orthopaedic surgery*. 2023;15(10):2485-2491. doi:10.1111/os.13826

Thank you!!!

Questions?