



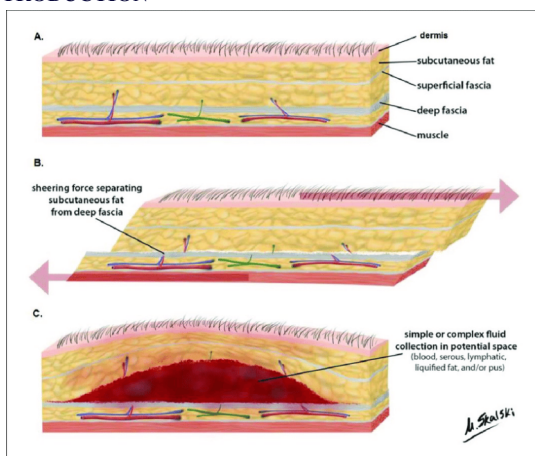
CASE REPORT - A RARE CASE OF "MOREL LAVALLEE LESION" (POST-TRAUMATIC CLOSED DEGLOVING INJURY) OF LEFT THIGH.

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ABSTRACT Morel-Lavallee lesions are post-traumatic closed degloving injuries occurring deep to subcutaneous plane due to disruption of capillaries. Here, a 60 year old male presented with a large cystic swelling on the left lateral thigh region since 2 years. Patient has past history of traumatic injury due to RTA before 2 years, then he developed swelling which was gradually progressive over period of 2 years. CECT-left thigh suggests large multiloculated cystic lesion in subcutaneous plane with internal septations & wall calcification. Patient was managed with Incision & Drainage and then regular dressing with compression bandage. The lesion subsided at the time of discharge.

KEYWORDS :

INTRODUCTION



- Morel Lavallee Lesions are post-traumatic closed degloving injuries occurring deep to subcutaneous plane due to disruption of capillaries resulting in an effusion containing hemolymph and necrotic fat.
- This condition was first described by French physician MAURICE MOREL LAVALLEE in the year 1853.
- Morel Lavallee effusions may be associated with pelvic acetabular fracture or may also occur with blunt trauma in the absence of fracture.
- The lesion classically occurs over the greater trochanter of the femur, strictly speaking occurs in the lateral thigh. However similar lesion may also develops in lumbar region, scapula and knee.
- Morel Lavallee Lesions typically occurs when the skin and subcutaneous fatty tissue traumatically and abruptly separate from the underlying fascia.
- The initial injury represents a shearing of subcutaneous tissue away from underlying fascia. The space created superficial to the fascia is filled by various types of fluid ranging from serous fluid to frank blood.
- The collection may then spontaneously resolve or become encapsulated and persistent.
- Early diagnosis and management of the lesion is essential so as to prevent complications like infections or extensive skin necrosis.

CASE REPORT

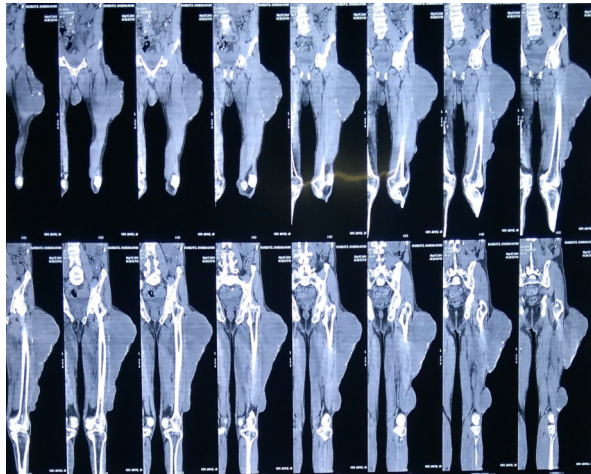
- A 60 year old Hindu male patient coming from lower socio-economic status working as a laborer presented with complain of a large cystic swelling over the left thigh region since 2 years.
- Patient has past history of traumatic injury of lower limbs due to road traffic accident before 2 years, then he developed a small swelling over left lateral thigh, which was gradually progressive.

PRE-OPERATIVE



- On local examination, A large, single, fusiform shaped left lateral thigh swelling of approximately 36 x 12 x 12 cm in size was present extending from left iliac crest up to the left lateral knee. It was non-tender, with irregular and nodular surface and well-defined margin, multi-loculated, tense-cystic and variegated in consistency, non-mobile and fixed to skin and underlying fascia. The swelling was non-pulsatile, non-reducing, non-compressible. Trans-illumination was negative. Fluctuation was positive.
- Distal pulsations of left lower limb are normal without any signs of distal neuro-vascular deficit.
- Routine blood investigations-CBC,RFT,LFT,PT-INR-Normal. HIV, HBsAg were Negative.
- Chest X-ray was Normal, Local part X-ray did not show any bony lesion.
- Doppler study of left lower limb arteries was Normal.

CECTSCAN OF LEFT THIGH



- CECT scan of left thigh: which suggests of approx. 35.3 x 11.3 x 11.6 cm sized (CC x AP x TR) large multi-loculated cystic lesion noted in subcutaneous plane in lateral aspect of left thigh showing internal septations and wall calcification. Findings suggest possibility of benign cystic lesion (likely Morel lavallee lesion). The bones of thigh appear normal.

INTRA-OPERATIVE



- Patient was managed with Incision and drainage with curettage and Irrigation and allowed to heal by secondary intention by regular dressing and compression bandage. Approximately 1.5 litres of thick yellowish pus was drained. No organisms or Acid-fast bacilli are isolated from pus culture.
- Post-operative recovery was uneventful and patient was discharged after 3 weeks without any complications.

HISTOPATHOLOGICAL EXAMINATION :

- The wall show marked area of hyalinised and degenerative tissue, areas of hemorrhage with foci of necrosis and inflammatory cells. It show fibroconnective tissue with foamy macrophages and cholesterol crystals and congested vessels.
- There is no evidence of Koch's or malignancy.

DISCUSSION

- MOREL-LAVALLEE LESIONS are post-traumatic closed degloving injuries occurring deep to subcutaneous plane. There is disruption of capillaries resulting in an effusion containing hemolymph and necrotic fat.
- Early diagnosis and management is essential as any delay in diagnosis or missed lesion will lead to the effusion becoming infected or leading to extensive skin necrosis.

DIFFERENTIAL DIAGNOSIS :

- 1- Hemangioma

- 2- Sarcoma
- 3- Subcutaneous Hematoma
- 4- Hydatid Cyst
- 5- Fat Necrosis

- **MRI** is the preferred imaging modality of choice. The lesion are often homogeneously hypointense on T1W sequences and hyperintense on T2W sequences.

[NOTE : MRI is not done in this patient, as patient is having orthopedic implant in right femur shaft.]

- **MELLADO AND BENCARDINO CLASSIFICATION** of morel lavallee lesions is based on the shape of lesion, signal characteristics, enhancement and presence or absence of a capsule.

	Type I	Type II	Type III	Type IV	Type V	Type VI
	Seroma	Subacute hematoma	Chronic organizing hematoma	Closed laceration	Pseudo-nodular	Infected
Distribution	62%	12%	31%	-	-	-
Morphology	Laminar	Oval	Oval	Linear	Round	Variable sinus tract
T1 signal	Low	High	Intermediate	Low	Variable	Variable
T2 signal	High	High	Heterogeneous	High	Variable	Variable
Capsule	Sometimes	Thin	Thick	Absent	Variable	Thick

- The history of trauma, characteristic locations, Intra-operative findings, Histo-pathological examination and MRI feature contribute to a correct diagnosis.
- The treatment of the Morel Lavalle lesions is based on the size, severity, duration and presence of a capsule in the lesion.
- Small lesions that have not developed a capsule can be managed with close observation without any intervention or may require less invasive methods like percutaneous aspiration and drainage and compression bandaging.
- Larger lesions having capsule may not respond to repeated needle drainage and often need open drainage and healed by secondary intention. Debridement with drainage is also recommended to prevent infections. It is essential to remove pseudocapsule to prevent recurrence.
- Non operative management like sclerodesis with talk, Doxycycline and alcohol have been reported to be effective.

SUMMARY

- Morel-lavallee lesions are post-traumatic, closed degloving injuries occurring in the subcutaneous plane superficial to the muscle plane due to disruption of capillaries resulting in an effusion containing hemolymph and necrotic fat.
- MRI is the modality of choice in the evaluation of Morel-lavallee lesion.
- Surgical management includes Incision and Drainage, Debridement and Irrigation.

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