



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**MOREL LAVALLEE LESION- A NOT SO RARE, BUT OFTEN MISSED DIAGNOSIS**

**KEY WORDS:** Morel lavallee lesion, degloving, hematoma

<b>M. Rajeshwari</b>	Institute of General Surgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai, Tamilnadu, India.
<b>P. S. Shanthi</b>	Institute of General Surgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai, Tamilnadu, India.
<b>R. Kannan</b>	Institute of General Surgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai, Tamilnadu, India.
<b>N. Ganapathy*</b>	Institute of General Surgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai, Tamilnadu, India. *Corresponding Author

**ABSTRACT**

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. Magnetic resonance imaging (MRI) is the modality of choice in the evaluation of Morel-Lavallee lesion. 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. We present a case of 62year old male patient (hemiplegic) who presented with a swelling at lumbosacral region for 3 months following a trivial trauma. Clinical examination revealed a freely mobile non-tender cystic swelling of size 15cm\*8cm with well defined borders at the lumbosacral region just above the gluteal cleft. USG revealed it to be a Hematoma. MRI LS spine revealed it to be a cystic lesion with internal septations, suggestive of Morel Lavallee lesion. Six types of Morel Lavallee lesions are described and this case comes under TYPE 3(Chronic organising hematoma). We intend to present this case to sensitise the readers about the early diagnosis and management of this lesion and in preventing further complications.

**INTRODUCTION:**

Morel Lavallee lesion, a closed degloving occurring after a trivial trauma which may occur within few days to few months after the trauma. The skin and subcutaneous tissues gets separated from the deep fascia, thereby creating a potential space which leads to accumulation of blood, lymph and necrotic material. On later stages, these can lead on to chronic inflammatory reaction producing a thick fibrous capsule around the lesion.

**Case report:**

**History :** A 62year old male patient, a known hemiplegic, presented to the outpatient department with complaints of a swelling in the lumbosacral region for the past three months. He has a history of a trivial trauma to his back. There is no history of pain. Patient was a known case of right sided hemiplegia for the past 3 years and is on treatment for the same.

**Clinical examination:**

General examination of the patient was within normal limits.

On local examination, swelling in lumbosacral region, just above the gluteal cleft of size 15 \* 8 cm, bean shaped, smooth surfaced, well defined borders with no dilated vessels and skin over the swelling appears normal. On palpation, the swelling is not warm, non tender, freely mobile, smooth surfaced, cystic in consistency with a positive fluctuation. There is no bruit or hum over the swelling.

**Fig.1 showing the clinical picture**



**Investigations :**

High frequency USG of the swelling revealed a fluctuant swelling with septations and internal echoes, suggestive of hematoma.

MRI LS SPINE revealed a cystic lesion with internal septations measuring 10\*2\*8 cm in skin and subcutaneous plane noted in region of sacrum. There is no evidence of fistula, sinus or CSF extension. Underlying bones appears normal. Features suggestives of MOREL LAVALLEE LESION.

**Fig 2 showing the MRI images of the lesion.**



**Surgical intervention findings:**

Excision of the swelling was done and specimen sent to histopathological study. A tight compression dressing was done with a drain kept in placement to obliterate the dead space created.

**Fig 3 showing the intraoperative finding.**



DT was removed on the 4<sup>th</sup> post operative day and patient was discharged. Post operative wound apperas healthy.

**Follow up:**

Follow up of patient after 2 weeks revealed a healthy wound. After 5 months follow up, patient was found to have healed scar with no evidence of recurrences.

**DISCUSSION:**

Morel Lavallee lesion, first described by Victor Auguste Francois Morel-Lavallee, is a closed degloving injury occurring after a trauma. The lesion may occur within a few days and in some patients it may take upto several months to years [1]. The skin and subcutaneous tissues gets separated from the underlying deep fascia. Shear injury disrupts the perforating vessels and lymphatics, thus creating a potential space wherein blood, lymph and necrotic materials accumulate. The most common sites of occurrences are over the bony prominences, most commonly over greater trochanter of femur, lumbar spine, scapula, knee and elbow.

On ultrasound they appear as well defined fluid collection between subcutaneous tissue and deep fascia. Fluid collection may be anechoic or hypoechoic depending on the content. MRI is the best modality of diagnosing and evaluating Morel- Lavallee lesion. They are seen as well defined lesions with tapering margins that are continuous with adjacent fascial planes. They have a variable appearance depending on concentration of haemo-lymphatic fluid. They may or may not have a capsule depending on the duration of lesion

Mellado and Bencardino proposed a classification based on the shape of lesion, signal characteristics, enhancement, and the presence or absence of a capsule [2]. Six types of lesions were described.

Type I lesions were laminar shaped fluid intensity lesions with decreased T1 and increased T2 signal. They occasionally had a capsule which did not enhance.

Type II lesions were oval shaped with increased T1 and T2 signal and looked like a subacute haematoma. They had a thick capsule with variable enhancement.

Type III lesions were oval shaped with intermediate T1 and heterogeneous T2 signal and had the appearance of a chronic organizing haematoma. They had a thick capsule with internal/peripheral enhancement.

Type IV lesions were linear shaped with hypointense T1 signal and hyperintense T2 signal and looked like a closed laceration. These lesions had no capsule and variable enhancement.

Type V lesions were round in shape with a variable T1 and T2 signal described as pseudonodular, they may have a thin or thick capsule and had internal/peripheral enhancement.

Type VI were considered infected with variable T1 and T2 signal and had variable sinus tract formation, a thick capsule and internal/ peripheral enhancement.

Our case comes under Type 3 (a chronic organising hematoma). Once the lesion is identified, the hematoma should be evacuated and necrotic material removed. Neglected lesions can become infected [3] and progression of lesion may lead to extensive skin necrosis. Conservative treatment with compression can be utilised for small acute lesions without a definite capsule. Presence of a capsule would render conservative or percutaneous treatment unsuccessful, thus leading to recurrence if not managed surgically.

**CONCLUSION :**

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 the lesion. Early diagnosis and management is essential. Presence of a capsule indicates the choice of surgery over the conservative management of the lesion.

However the presentation of morel lavallee lesion at the lumbosacral region is rare and with both a bowel loop and bladder peritoneum as content is even rare and hence we have reported it.

**Conflict of interest: No**

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