


## CASE IMAGE

# Delayed diagnosis of Morel-Lavallee lesion after multiple injuries

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Morel–Lavallee lesion (MLL) is a post-trauma degloving cyst, usually filled with blood, lymph, or necrotic tissue, which mostly develops in the area around greater trochanter. MLL is associated with the potential risk of infection and progressive expansion of untreated lesions can cause pressure necrosis of overlying skin.<sup>1,2</sup> However, MLL may be missed because it is not visible on the body surface, and the signs of MLL may not be initially apparent. We report a case of delayed diagnosis of MLL after multiple injuries. A 37-year-old man was run over by a truck. Pelvic fractures were detected, and transcatheter arterial embolization and fixation were performed. On the 10th day, delayed sigmoid colon perforation was diagnosed, and emergency surgery was performed. Postoperative hemoglobin level was 10.6 g/dL, but anemia gradually progressed. On day 28, the hemoglobin level was 6.9 g/dL and a blood transfusion was required. In addition, subcutaneous hematoma remained in the left buttock and thigh, and skin necrosis was found on the left buttock and thigh. Therefore, on day 30, plain CT was performed. Plain CT showed an extensive low-density area in the subcutaneous soft tissues of the low lumbar and the left buttocks extending caudally to the left lower thigh and the right greater trochanter (asterisks) (Figure 1A), a finding consistent with a MLL. Needle aspiration was performed, and 1020 mL of old blood was collected from the lesion. However, contrast-enhanced CT on day 47 showed an encapsulated, subcutaneous lesion in the same area (asterisks) (Figure 1B). MRI on day 51 showed an encapsulated, abnormal-intensity lesion in the subcutaneous soft tissues of the low lumbar and the left buttocks extending caudally to the left lower thigh and the right greater trochanter (asterisks). Within this lesion, T1-weighted images appeared isointense to hypointense, and T2-weighted images appeared predominantly hyperintense. MRI coronal STIR shows no fat suppression (Figure 1C).

MRI also showed a partial injury to the muscles of the left buttocks (white arrow). In some places within these muscles, T2-weighted images and STIR appeared hyperintense, and T1-weighted images not appeared hyperintense (Figure 1C). Treatment was based on clinical symptoms, lesion size, severity, age, and co-morbidities.<sup>1,2</sup> In this case, surgical excision was performed on day 55 because of the size of the fluid retention. We opened the lesion widely and debrided the interior, and three drainage tubes were inserted. Negative pressure wound therapy was performed thereafter. The wound was healed at 3 months after the trauma. MLL became more marginated as they aged and the chronic lesions were encapsulated. The majority shape of MLL was lenticular and oval, and there was a trend toward an increase in the size of lesion from the acute to the subacute stage and a decrease in size from the subacute to the chronic stage.<sup>3</sup> In this case, CT and MRI were performed after 47 and 51 days showed an encapsulation, but the size of lesion did not decrease. Further, there were not only the separation of the skin and subcutaneous fat from the underlying fascial planes, but also a partial injury to the muscles of the left buttocks. High-energy trauma resulted in more extensive lesions. MRI is available for diagnosis of MLL, but CT is underrecognized.<sup>3</sup> Often, MLL is overlooked in patients presenting with multiple injuries.<sup>4</sup> Increased awareness of MLL characteristics on CT will lead to early diagnosis and treatment of MLL, and prevent the development of complications.

## CONFLICT OF INTEREST STATEMENT

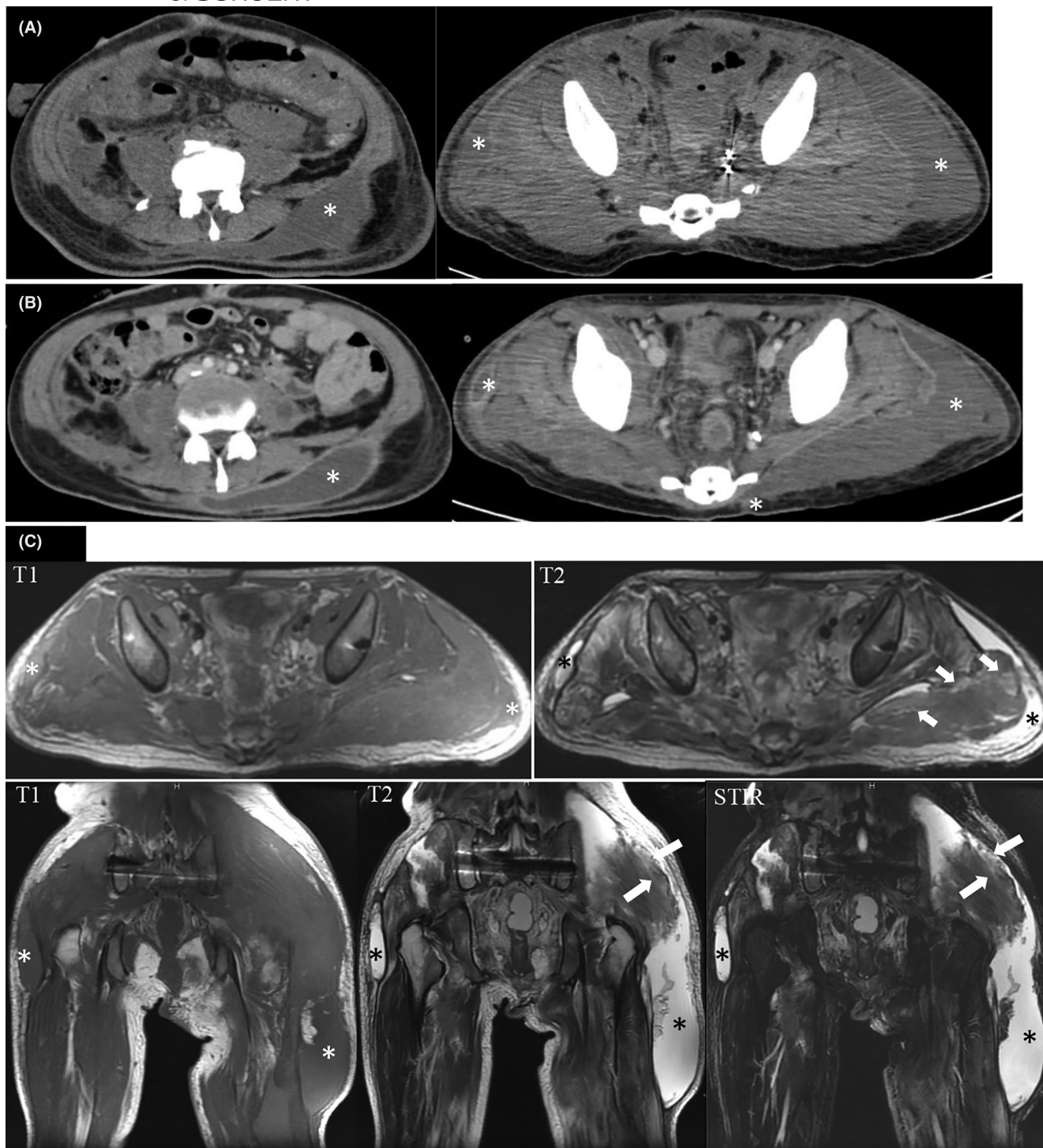
None declared.

## DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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**FIGURE 1** (A) Plain CT showed an extensive low-density area in the subcutaneous soft tissues of the low lumbar and the left buttocks extending caudally to the left lower thigh and the right greater trochanter (asterisks). (B) Contrast-enhanced CT showed an encapsulated, subcutaneous lesion in the subcutaneous soft tissues of the low lumbar and the left buttocks extending caudally to the left lower thigh and the right greater trochanter (asterisks). (C) MRI showed an encapsulated, abnormal-intensity lesion (asterisks) and a partial injury to the muscles of the buttocks (white arrow). MRI coronal STIR shows no fat suppression.

#### ETHICS STATEMENT

Approval of the research protocol: N/A.

Informed Consent: The patient gave his consent for clinical information relating to this case to be reported in this medical publication.

Registry and the Registration No. of the study/Trial: N/A.  
Animal Studies: N/A.

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