



CASE REPORT

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The importance of morel-lavallee lesion in medicolegal evaluation: a case report

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Abstract

Morel-Lavallee Lesion (MLL) is the separation of the subcutaneous tissues from underlying fascia as a result of blunt or tangential forces and the recollection of hemolymphatic and liquefied fat in this separated area. This situation may occur months after the event, as well as immediately after the event. In this case report, a 55-year-old female injured in a road accident as a pedestrian and diagnosed as MLL was presented and it was aimed to call attention to difficulties of these kinds of cases and its reports. Therefore in forensic cases with such lesions, problem may arise regarding the establishment causation link during the regulation of final report and disability reports.

Keywords: Morel-Lavallee Lesion, pedestrian, report, causation

Introduction

The Morel-Lavallee Lesion (MLL) was first described by the French Doctor Maurice Morel-Lavallee in 1863 [1-5]. The blunt trauma or tangential force to the fascia results in tearing of the trans-aponeurotic vessels by the separation of the immobile fascia under the mobile subcutaneous tissue. Thus, a cavity comes into being due to the accumulation of hematomas and lymphocele, including necrotic and damaged skin tissues [1-9]. MLL is also referred to as "closed internal degloving injury", "Posttraumatic soft tissue cyst", "Morel-Lavallee extravasation or effusion" and "Chronic expanding hematoma". MLL is often the result of traffic accidents, but it can also be seen in people who play sports with close contact, such as football or wrestling [1,2,3,7].

MLL diagnosis is often delayed because clinical findings are variable and subcutaneous tissue injury are masked by skin findings [4,7,8]. It can occur in hours or days or even months or even years after the trauma [1,2,3,6]. Clinical findings such as swelling, ecchymosis, tension, pain, hypoesthesia in the lesion area and skin deformity can be detected in these cases [2,4]. Diagnosis is based on USG, CT and MR imaging methods besides physical examination findings [2,3,6,7]. Treatment of acute or chronic lesions may vary [1-4,6,8,9]. In this case report, a 55-year-old female who was referred to our department by the court was evaluated. A report was requested on whether the injury and the cure she had received were causally related to the accident, if there were any grounds for interrupting the causation, and if so, on the basis of the disability rate.

Case Report

A 55-year-old female who was injured in June 2013 due to a car accident as a pedestrian evaluated at the University Hospital which she applied first. At the evaluation of the patient, all system examinations had been normal except 3x3 cm abrasion on her right lower leg. Direct radiographs and CT findings had showed no acute pathology. Approximately one month after the accident, she had been diagnosed with MLL at the State Hospital where she had admitted because of pain and open wound of the right lower leg. She had been treated for about one month with wound-dressings, prophylactic antibiotherapy, excluding the necrosis area and then the flap had been recommended and she had been transferred to the University Hospital, the wound had been treated with skin flap and she had been discharged after a month.

She was sent to our department by the court in November 2014 and June 2015 for the evaluation of the causation and for the preparation of the disability report. The examination of the case was made after taking the informed consent. In physical examination, there was swelling in the right ankle and an 18x9 cm sized, irregular soft tissue protrusion from the skin on the front face of the right lower leg. Also, 16x9 cm sized, spreading posterior and lateral sides of the left thigh and rectangular scar tissues, where the necessary tissue for the flap had been provided; the narrowest side is 1 cm, the widest side is 2 cm and 22 cm length scar tissue starting from the left armpit and extending to the left lumbar region; 9 cm in size scar tissue at right inguinal region measuring was detected. The right leg circumference (over the flapped region) was measured as 44 cm and the left leg circumference as 35 cm (Figure 1.a and 1.b). We also got consent for taking photographs.

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Figure 1.a and 1.b: The front (a) and outer side view of the lesion (b).

As a result of her medical examination and plastic and reconstructive surgery consultation, it was reported that her treatment is related to the accident on 20.06.2013. It's determined that she was operated for tissue defect because of hematoma, fat necrosis, and the chronicity of the wound despite both protective and effective treatment of her leg. According to her medical documents; It was also determined that the surgery was performed only due to the damage caused by the crash and this treatment method was efficient and effective treatment considering the clinical situation of the person and it was found to be consistent with the literature by the plastic and reconstructive surgery consultation.

Discussion

The Morel-Lavallée Lesion is a lesion that can affect various parts of the body [1,3,7]. In a review by Vanhegan et al., 204 lesions were defined in 29 articles and lesion distributions; trochanter major/hip 30.4%; thigh 20.1%; pelvis 18.6%; knee 15.7%; gluteal region 6.4%; lumbosacral 3.4%; abdominal 1.5%; calf/lower leg 1.5%; head 0.5%; and not specified 2.0% were defined [10]. In this presented case the lesion is defined in the lower leg region where it is rarely seen.

While at the first physical examination of her, there was no other lesion except 3x3 abrasions and making diagnosis MLL was one month later after the accident,

establishing causation between diagnosis, lesion and the treatment was difficult by the judicial perspective. This suggests the question of why the injury initially defined as a simple abrasion and was treated surgically. If this surgery has done bound up with the accident or there were other reasons such as no effective treatment, being infected, starting medical treatment late. Thus; it seems that the court is also requested to clarify these points. Determination of a small, insignificant abrasion only at first in this case and being located at a relatively rare part of body are seen as the main problem in terms of causation. Considering all this, the biggest problem with MLL is the lesion that seen on physical examination does not show how big the trauma is.

Since the main purpose of the case report is not to mention the treatment of MLL, this issue has not been discussed in detail. However when we look at it all, it shows the basic methods are selected in the treatment algorithm of MLL at first but if the treatment does not respond the further treatment methods are applied. Examined document is showing concomitant antibiotic therapy has also begun to be prophylactic.

In conclusion, MLL is a trauma-related lesion with frequently late symptoms. These late symptoms cause problems in reporting disability. Different reports could be prepared by physicians who write the reports at different periods of the lesion. At the same time these

late symptoms cause some claims about physicians who have roles at the treatment as 'wrong diagnose', 'late treatment', 'ineffective treatment' and also 'lack of care and attention'. For these reasons, MLL should be kept in mind at forensic cases specially and be taken into consideration the reasons (the infection of injury, whether the disease progresses or if there is an ineffective treatment) that might cut the chain of causation between the event and the process of diagnosis and treatment.

References

1. Bonilla-Yoon I, Masih S, Patel DB, White EA, Levine BD, Chow K, Gottsegen CJ, Matcuk GR Jr. The Morel-Lavallée lesion: pathophysiology, clinical presentation, imaging features, and treatment options. *Emerg Radiol*. 2014;21(1):35-43.
2. Rha EY, Kim DH, Kwon H, Jung SN. Morel-lavallee lesion in children. *World J Emerg Surg*. 2013;8(1):60.
3. Jalota L, Ukaigwe A, Jain S. Diagnosis and Management of Closed Internal Degloving Injuries: The Morel-Lavallée Lesion. *J Emerg Med*. 2015;49(1):1-4.
4. Takahara S, Oe K, Fujita H, Sakurai A, Iwakura T, Lee SY, Niikura T, Kuroda R, Kurosaka M. Missed Massive Morel-Lavallee Lesion. *Case Rep Orthop*. 2014;2014:920317.
5. Mao RD, Tan EP, Goh HK. An unusual cause of haemorrhagic shock from a subcutaneous haematoma: a Morel-Lavallée lesion. *Singapore Med J*. 2015;56(4):62-4.
6. Örgüç Ş, Başara I, Özkarakaş P, Yoleri L. Kronik Morel Lavallee Sendromunun Radyolojik Bulguları: Olgu Sunumu. *Türk Plastik Rekonstrüktif ve Estetik Cerrahi Dergisi* 2011;19(1):45-50.
7. Latifi R, El-Hennawy H, El-Menyar A, Peralta R, Asim M, Consunji R, Al-Thani H. The therapeutic challenges of degloving soft-tissue injuries. *J Emerg Trauma Shock*. 2014;7(3):228-32.
8. Jameel J, Kumar S, Zahid M, Ahmad S. Delayed presentation of Morel-Lavallee lesion. *Saudi Med J*. 2014;35(7):750-2.
9. Harma A, İnan M, Ertem K. Morel-Lavallée lezyonu: Kapalı soyulma yaralanmalarında konservatif yaklaşım. *Acta Orthop Traumatol Turc*. 2004;38(4):270-3.
10. Vanhegan IS, Dala-Ali B, Verhelst L, Mallucci P, Haddad FS The morel-lavallée lesion as a rare differential diagnosis for recalcitrant bursitis of the knee: case report and literature review. *Case Rep Orthop*. 2012;2012:593193.