

'Lichtenberg Figure' as a Result of Lightning Shock

Yıldırım Çarpması Sonucu 'Lichtenberg Deseni'

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A 30 year-old-male was found unconscious while working outdoors. After completion of the initial evaluation, the Primary Health Care Center referred him to our emergency department. He couldn't remember what had happened to him and he was complaining of chest and back pain. His vital signs were in the normal ranges, and his physical examination values were normal except for the skin findings (Figure 1). The findings in his ECG, complete blood count, other laboratory results and brain-computed tomography were in the normal ranges.

Mainly six types of cutaneous findings occur as a result of being struck by lightning. They include linear burns, punctate burns, Lichtenberg figures (LF), contact burns from overlying metal objects, superficial erythema and their combinations



Figure 1. The figure demonstrating pathognomonic skin finding: 'Lichtenberg Figure.'

[1]. Moreover, entry and outlet holes of lightning strikes are rarely seen [2].

The painless, hyperemic, spreading and ferning pattern figure on the skin is called Lichtenberg figure (LF). It matches no anatomical, vascular, or neural patterns. Contrary to thermal and electrical burns, it is harmless to epidermis and deeper tissues. Although the exact mechanism is unknown, it is thought that they represent red blood cells extravasated into the superficial layers of the skin from capillaries secondary to the dielectric breakdown of the skin and subsequent massive electron shower [2].

Our patient was admitted to the observation unit. The patient, who was on observation status for 48 hours, discharged from the hospital and recommended to attend the outpatient clinic.

If a victim found unconscious outdoors, strike of lightning should be considered in the differential diagnosis. Pathognomonic skin findings should not be overlooked.

Key Words: Lichtenberg figure, lightning shock, flash

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References

1. Fish RM. Lightning injuries. In JE Tintinalli, MD, MS, Editor. Emergency Medicine, A Comprehensive Study Guide. 6th ed. New York: McGraw-Hill, 2004, pp.1235-38.
2. O'Keefe Gatewood M, Zane RD. Lightning injuries. Emerg Med Clin North Am 2004; 22: 369-403. [CrossRef]

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In the Image of Interest by Malali et al., entitled "Displaced Mousseau-Barbin Tube: A Rare Cause of Dysphasia", that was published in the previous issue of Eurasian Journal of Medicine (Eurasian J Med 2014; 46: 67-8), the term 'Dysphagia' in the title 'Displaced Mousseau-Barbin Tube: A Rare Cause of Dysphasia' has been typed erroneously as 'Dysphasia' on page 67.

We would like to sincerely apologize for this inconvenience.