Lightning



Objectives

- Students should be able to
- identify injuries due to lightning
- describe post mortem features of lightning

Lightning stroke

Lightning stroke occurs from cloud to the earth through the nearest & tallest object



Components liberated in lightning stroke

- 1) A massive current
- 2) Flash fire effect
- 3) Blast effect



Circumstances

- Sheltering under the tree
- Walking in the open space under umbrellas
- Inside a house using telephones, electrical appliances

Effects of lightning

High voltage current causes an immediate cardiopulmonary arrest



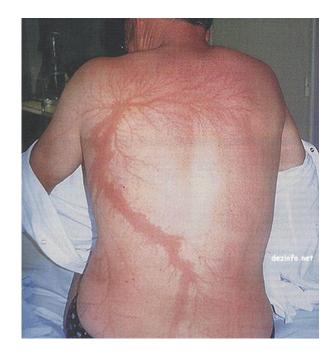
Burns due to lightning

- Heated metallic object worn by the person
- Superficial linear fern like skin burns over the moist skin creases- Filigree burns



Burns due to lightning

- Arborescent burns
- Superficial burns alone blood vessels due to local erythema called ferning.





Burns due to lightning

- Ignite cloths
- Charring of the body



Effects of blast wave in lightning

- Tearing of clothing and foot wear
- Thrown away injuries, fractures, internal injuries
- Damage to lungs, intestine, eardrum due to compression and decompression

Diagnosis of death from lightning

- History
 - History of thunder storm
- Evidence of lightning
 - Dead animals, damage trees and houses







Diagnosis of death from lightning

- Melted or magnetized metallic objects
- Clothes burnt or torn
- Extensive injuries
- Typical Burns



Postmortem findings

- Internal
 - Non specific
 - Congestion of organs
 - Petechial haemorrhages

Causes of death

- Ventricular fibrillation
- Burns
- Injuries
- Delayed effects of burns and injuries

Summary

- Component of lightning flash
 - Current
 - Flash-fire effect
 - Blast effect
- Effects of lightning
 - Burns
 - Blast injuries

Diagnosis of death due to lightning

Reference

- Pathology of trauma ,3rd ed.— Bernard Knight
- Lecture notes on injuries Dr L.B.L.de Alwis
- Simpson's Forensic Medicine, 12th ed. Richard Shephered

- Acknowledgement Sources of images
- Reference books
- Google images
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