



Case #75

NAME Educational Activities Committee

Submitted by Dr. Ross Zumwalt (Mayo Clinic)



1. This 36-year-old man was found dead lying on the lawn outside of his residence. The marks on his leg are most likely due to:

- Pseudo-stippling from an interposed target
- Postmortem insect activity
- Chronic dermatitis
- Chemical splash burn
- Cigarette burns (self-inflicted)

Answer...

B. Postmortem insect activity (CORRECT ANSWER, 68.98% of responses)

Someone who dies in a warm or hot environment can quickly attract insects. For example, blow flies will deposit fly eggs very quickly after death (see additional image in this case). Ants will quickly attack skin and feed on the keratin of the epidermis leaving shallow defects in the outer layer of the skin exposing the underlying dermis which will turn yellow, orange or red depending on the body part and position. In areas of livor mortis the defect in the dermis will turn red and may even ooze some blood. The areas of skin involved are slightly sunken and sharply demarcated from the surrounding areas of uninvolved skin. There is no piling up of skin on one side of the lesion as might be seen with a fresh abrasion. Roaches can cause of the same type of postmortem lesion. A second photo of the body when found shows scattered ants on the torso.



Ants on the body at the time of autopsy.



Additional insect activity: Fly eggs deposited on the face.

Other responses:

A. Pseudo-stippling from an interposed target (16.29% responses)

Pseudo-stippling is commonly seen in gunshot cases with an interposed target such as a door or window. These small abrasions are caused by fragments of glass or wood from the interposed target striking the skin. They are usually irregular and often surround the defect caused by the projectile. Pseudo-stippling is often accompanied by the material causing the pseudo-stippling: glass fragments or wood chips for example may be seen on the skin or clothing.

C. Chronic dermatitis (3.17% responses)

Chronic dermatitis is usually characterized by lesions of different ages and degree. Often the lesions are nodular, raised, and have accompanying areas of erythema, healing, or scarring.

D. Chemical splash burn (9.65% responses)

A fresh chemical splash burn would not be expected to show such demarkation between involved and uninvolved areas but more areas with different degrees of involvement with lack of abrupt demarkation. In older burns there would be scabs and not depressed areas with loss of epidermis.

E. Cigarette burns, self-inflicted (1.92% responses)

Like chemical burns, healing cigarette burns should have areas of surrounding erythema and swelling. Fresh cigarette burns are often characterized by similar size and shape (round or oval)

Reference

- Forensic Pathology: Principles and Practice. Dolinak, Lew, Matshes eds. Chapter 24: Postmortem changes. Elsevier Academic Press. 2005