

Puzzling Cases: Wound Sleuth



BY Rob Miller

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A 75-year-old female patient is referred to the wound-care clinic with a history of a scaly leg. She has had leg ulcers in the past that have healed, but she is now concerned about the size and discoloration of her lower leg.

On examination, you see that her leg is covered with a thick, tenacious, greyish scale (Figure 1).

Superior to the large area of heaped-up scale you notice hyperpigmentation that, in places, appears to follow the veins. Distal to the ankle region there are a number of small reticular veins, as well as hyperpigmentation.

Question: What is the nature and cause of this scaling and what should be done?

Answer: This patient has developed chronic lipodermatosclerosis as a result of her venous leg ulcers. The hyperpigmentation is a result of chronic venous stasis, as are the spider and reticular veins on the inferior ankle region. The hyperpigmentation is a result of the breakdown of the red blood cells in the dermis and the subsequent deposition of hemosiderin. The hyperpigmentation also represents increased melanin production by the melanocytes in the epidermis, which occurs as a result of the inflammation.

In addition, she has developed retention hyperkeratosis as a result of chronic irritation and inflammation of the lower legs. The scales are composed of the superficial layers of the epidermis, which occur as a result of the chronic inflammation in this area. Poor personal hygiene may also be part of the etiology for this condition.

In rare cases, hypothyroidism can result in thickening of the skin.

Removal of this thick hyperkeratosis is difficult and requires time and patience. There is no need to remove it other than for cosmetic reasons. However, such



hyperkeratosis can sometimes lead to small fissures in the skin, which may lead to secondary infection. In addition, it may create some degree of odour from the increased growth of bacteria.

Initially, I would treat this condition with a moisturizing cream that contains lactic acid, which helps to break down and remove some of the scale. If that does not work, then occluding it with petroleum jelly at nighttime may gradually soften up some of the thickened skin so that it can be removed with a pumice stone or other abrasive material. Once the scale is removed, the skin must be continually moisturized to help prevent repeat build-up. ☺