

# External Manifestations of Internal Disease



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Certain disorders of the skin are more frequently associated with diabetes. Necrobiosis lipoidica (NL) is a general term that refers to lesions that occur mostly in insulin dependent diabetic patients. Often these lesions appear years before the onset of diabetes. NL tends to develop slowly and typically is asymptomatic. Nonetheless, due to the unsightly appearance of NL, patients often want a diagnosis as to the etiology of the lesion. Astute physicians who spot NL can play an important role in evaluating patients for the early development of diabetes and reassure them of the benign nature of these lesions.

NL can occur at any age; however, it most commonly starts in the third to fourth decades of life. Lesions mostly present on the anterior and lateral aspects of the shins but occasionally present on the calves, arms and thighs. There may be one or several lesions bilaterally. These lesions occur three times more often in women compared to men. NL is a granulomatous skin disorder of uncertain etiology. They begin as round, violaceous patches and slowly expand. The advancing border is red and the central area turns a characteristic red-brown to red-orange. The central area atrophies and has a shiny waxy surface with prominent telangiectasia. Occasionally these lesions can be anesthetic due to destruction of the cutaneous nerves.

## Leslie's lesion

Leslie, a 40-year-old Caucasian woman, presents with a 3-month history of a lesion on her calf (Figure 1). It has a well demarcated, raised and firm border. She recalls hitting the same area with her car door weeks earlier. The lesion is asymptomatic. She has been using vaseline on the lesion with no effect. Leslie has been diagnosed with Type 1 diabetes since she was 15. She reports no other history of any skin disorders aside from mild acne in her teenage years.

[Read on for what to do for Leslie...](#)



Figure 1. Leslie's lesion on her calf.

## Take-home message

- When considering the diagnosis of necrobiosis lipoidica it is important to determine whether the patient is diabetic
- If they are not diabetic it is prudent to order a glucose tolerance test for the patient
- Appropriate reassurance regarding the benign, although cosmetically frustrating, nature of this disorder is crucial to share with patients
- If mid-potency steroids do not readily decrease active expansion and inflammation of the lesions, referral to a dermatologist is recommended


Although biopsy is diagnostic, the clinical features are often so characteristic that biopsy is not required. The number, size and severity of the lesions has not yet been correlated with the degree of diabetic control.

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## Treatment

Leslie was diagnosed with NL and was treated with mid-potency topical steroids. She was also counselled regarding the importance of protecting her legs from trauma to decrease the likelihood of ulceration. Unfortunately, there is no treatment for NL that has proven efficacy in double-blind, placebo-controlled studies. From a cosmetic standpoint she was informed that the prognosis is poor. Steroid treatments helped reduce the expansion of these lesions, however often they do not result in clearance of the lesions. Surgically her options include excision and grafting. It was also discussed that pulse dye lasers improve the erythema and telangiectasia associated with NL. If Leslie's lesion continued to expand despite the mid-potency topical steroid, it would be appropriate to use intralesional steroid injections to lessen the inflammation and spread of active lesions. Leslie was then offered a referral to a dermatologist. 

## Resources

1. Lowitt MH, Dover JS: Necrobiosis lipoidica. *J Am Acad Dermatol* 1991; 25(5 Pt 1):735-48.
2. Ferringer T, Miller F: Cutaneous Manifestations of Diabetes Mellitus [In Process Citation]. *Dermatol Clin* 2002; 20(3):483.
3. Goette DK: Resolution of Necrobiosis Lipoidica with Exclusive Clobetasol Propionate Treatment. *J Am Acad Dermatol* 1990; 22:855.
4. Jelinek JE: Cutaneous Markers For Diabetes Mellitus and the Role of Microangiopathy. In: *The Skin and Diabetes*. Lea & Febiger: Philadelphia, 1986:31.