

Chapter 4

When the Skin Breaks Down: Early Warning Signs on the Diabetic Foot

Our body uses the skin as the first line of defense against the invasion of bacteria. The skin contains highly specialized structures such as blood vessels, nerves, hair follicles, sweat glands, and sebaceous (oil) glands. The nerve supply to the skin has both sensory and motor functions. The sensory nerves of the skin allow us to feel touch, hot, cold and pain. Involuntary nerves control the sweat glands, the small vessels of the skin, and controls the muscles of the foot and leg. When the nerves and small blood vessels undergo changes inflicted by Diabetes Mellitus, skin color and texture also begin to show the changes. Bluish, reddish and whitish colors of the skin (Fig 4-1), in addition to the presence or absence of hair and the decrease in texture (Fig 4-2) , are all typical signs of a foot problem, affected by diabetes.



Fig 4-1



Fig 4-2



Fig 4-3



Fig 4-4

Only skin changes can be the first sign that indicates the beginning of many complications related to diabetic foot. Skin lesions are common in diabetic foot and occur with other Diabetes-related complications, such as kidney and eye problems.

The most common first and subsequent skin lesions in diabetics are dermopathies. Brown spots are skin lesions (Fig. 4-3) that are commonly located on the shins and are often seen in diabetics. These lesions are about a half inch in diameter, there is a slight hole in the center, often crusted. The reason for dermopathy in diabetics is unknown and does not require treatment, as these lesions improve over time. These rarely ulcerate or become infected.

The next common skin lesion in diabetics is called Necrobiosis Lipoidica Diabeticorum (NBLD) see fig. 4-4. NBLD lesions are usually seen on the shins but can be all over the body. These appear yellow in the central area and brownish red in the periphery. These sting and burn and can become ulcers. Unless the lesions ulcerate, treatment is not required. NBLD often appears before the onset of diabetes and is more common in women. NBLD is considered a more severe form of diabetic dermopathy. The exact cause of NBLD is not very well known.

Blistering diabetic foot lesions are seen in diabetics with poor blood sugar control. These lesions are called Bullosis Diabeticorum. Sometimes they can be superficial or deep blisters on the skin. The size of the lesions can vary from small to large blisters. (fig. 4-5). These blisters will develop quickly without any injury and are painless. Once the blister occurs, immediate medical attention is required, and it needs to be differentiated from injuries caused by poor circulation or neuropathy. The blister heals very slowly but sometimes an infection occurs and spreads to deeper structures in the foot, causing infection of the bone. (fig. 4-6).



Fig 4-5



Fig 4-6

Itching is quite common in diabetes. When severe itching occurs on the foot, it is very uncomfortable and disturbing especially at night. The cause is unknown but generally affected people have severe dry skin. Sometimes uremia (a condition caused by excessive toxic byproducts in the blood) in diabetes causes itching. Treatment is required because infection is common in the itchy area. Steroid-containing creams may be helpful in relieving itching, and blood sugar control appears to be helpful as well.

TEST YOURSELF

(T F) True or false

1. T F Brown patches on the skin of legs of diabetic indicate the beginning of neuropathy of diabetic.
2. T F Dermopathy of Diabetic does not require any treatment.
3. T F lipoidica diabeticorum (NBLD) Necrobiosis is the skin lesion that appears as yellow in the center and brown in the periphery.
4. T F Bullosis diabeticorum T F is the blister that appears without the wound. You should immediately release it with a clean needle and remove all the liquid out of the blister.

1. (F) 2. (T) 3. (T) 4. (F)