

Clinical features

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The ulcer must be carefully examined. A venous ulcer usually has a gently sloping edge and the floor contains granulation tissue covered by a variable amount of slough and exudate. Any significant elevation of the ulcer edge should indicate the need for a biopsy to exclude a carcinoma (usually a squamous cell). Venous leg ulcers characteristically develop in the skin of the gaiter region, the area between the muscles of the calf and the ankle. This is the region where many of the Cockett perforators join the posterior tibial vein to the surface vein, known as the posterior arch vein. The majority of ulcers develop on the medial side of the calf, but may develop anywhere in the gaiter area. Extension onto the foot or into the upper calf is uncommon and, if there is ulceration at these sites, other diagnoses should be seriously considered. Ulcers often develop in response to minor trauma; many patients notice some itching, perhaps associated with mast cell degranulation, before the ulcers develop. Almost all venous ulcers have surrounding haemosiderosis (seen as pigmentation) and the more chronic ulcers develop LDS with associated fibrosis of the subcutaneous tissue (Figure 62.10). This is manifest as thickening, pigmentation, inflammation and induration of the calf skin. The pigmentation comes from haemosiderin and melanin and the haemosiderin itself may be an important factor in ulcer development. A full examination of the front and back of the limbs with the patient standing should be carried out to assess the presence of varicosities and truncal incompetence of the saphenous systems (note that venous ulcers are not always accompanied by varicose veins). All patients should have their pulses palpated and, if there is any doubt, their arterial Doppler pressures should be measured. Sensation and proprioception should be assessed to exclude neuropathy, especially in patients with diabetes. A careful examination of the hand and other joints may confirm the presence of rheumatoid arthritis or osteoarthritis. Frank Bernard Cockett, 1916–2014, surgeon, St Thomas's Hospital, London, UK. Jean-Nicholas Marjolin, 1780–1850, surgeon, Paris, France, described the development of malignant ulcers in scars in 1828. Most vascular surgeons will carry out a duplex scan when the patient with an ulcer is first seen to assess the status of the deep and superficial veins. The presence of reflux in these veins does not confirm a venous ulcer, but supports the diagnosis in the absence of another cause and helps direct treatment. Venous ulcers are characteristically difficult to heal; however, persistence may indicate that there is another or coexisting cause (e.g. malignancy, rheumatoid arthritis or arterial ischaemia). Biopsies are indicated if malignancy is suspected and it is important to remember that a Marjolin's type of ulcer (a squamous cell or basal cell carcinoma) can develop in a chronic longstanding venous ulcer (Figure 62.28). Patients with atypical or with ulcers not responding to treatment should have a full blood count, blood glucose, erythrocyte sedimentation rate (ESR) or C-reactive protein (CRP) assessment as well as a sickle cell test if they have an appropriate ethnic background. Anaemia can both cause ulcers (e.g. sickle cell disease and pernicious anaemia) and be a result of ulceration (e.g. iron deficiency anaemia and the anaemia of chronic disease). Polycythaemia is a rare cause of ulceration. An antibody screen should be obtained if the ulcer appears 'atypical' or if there is any suggestion of joint disease (e.g. rheumatoid arthritis). All patients presenting with a new ulcer should have their Doppler pressures measured unless the foot pulses are easily palpable and have been confirmed as such by a

vascular specialist.

Revision #1

Created 2025-12-31 15:23:19 UTC by Omar Ayman

Updated 2025-12-31 15:23:19 UTC by Omar Ayman