

## Case 28 A chronic leg ulcer



Figure 28.1

*This patient, a housewife aged 72 years, had had this ulcer on her leg for many years (Fig. 28.1). She thought it had followed a 'swollen leg' that she had during her last (fourth) pregnancy when she was 38 years old. She had treated her leg with various balms and ointments from the chemist's shop, but had never sought medical advice. Apart from this lesion, general examination revealed an obese, but otherwise healthy, old woman. A routine blood count was normal and her blood sugar was within normal limits.*

### What names are given to this common condition?

The popular term is varicose ulcer, which is often a misnomer, as will be discussed below. Other names are venous ulcer or gravitational ulcer.

### On examination, there was no evidence of varicose veins on either leg, so what is the likely aetiology of the ulcer in this patient?

A preceding deep vein thrombosis (presumably complicating her last pregnancy). This would have caused damage to the valves of the deep veins in her leg, which would have resulted in venous hypertension and, there-

fore, poor cutaneous blood supply to the skin and subcutaneous tissues of the lower leg.

### What do you notice about the patient's foot and the skin surrounding the ulcer? Can you explain these changes?

The foot is oedematous as a result of the venous hypertension in the lower leg (remember Starling's law of fluid exchange in the tissues). The skin surrounding the ulcer shows the typical pigmentation, often called 'varicose eczema', which results from diapedesis of red cells through the capillaries. These break down and deposit haemosiderin in the soft tissues.

### What is a dangerous, but fortunately uncommon, complication of longstanding cases of this disease?

Malignant change at the edge of the ulcer into a squamous carcinoma – an example of a Marjolin's ulcer\* (malignant change in any chronic ulcer). Indeed, we were suspicious that this might have taken place at the lower edge of this woman's ulcer, but a tissue biopsy revealed no evidence of tumour. A clinical feature that suggests malignancy is a non-healing ulcer with a raised margin, particularly one that has shown a recent unexplained deterioration in appearance.

### What are the other possible causes of a chronic ulcer of the leg?

Venous ulcers are by far the commonest cause of a chronic ulcer of the leg in the Western world, and account for about 90% of cases. However, it is important to remember that other causes occur, whose treatment and prognosis may be very different. These can be listed as follows:

\*Marjolin – see Case 14, p. 29.

- Venous ulcer: Complicating deep venous insufficiency.
- Ischaemic ulcer: Due to impaired arterial blood supply; the peripheral pulses must always be examined and the ankle-brachial pressure index (ABPI) checked.
- Neuropathic ulcer: Particularly common in diabetics, where it is often compounded by ischaemia due to diabetic microangiopathy.
- Malignant ulcer: A squamous carcinoma, often arising in a pre-existing chronic ulcer or an ulcerated malignant melanoma.
- Ulcer complicating systemic disease, e.g. acholuric jaundice, ulcerative colitis and rheumatoid arthritis
- Arteriovenous fistula-associated ulcer.
- Repetitive self-inflicted injury.
- Gummatous ulcer of syphilis: Usually affects the upper one-third of the leg.

An example of the importance of remembering differential diagnoses will be discussed in Case 29 (p. 61).

### How should this patient be treated?

A number of important steps are taken:

- All ointments and medicaments should be thrown away.
- The ulcer is debrided, any dead tissue excised and the ulcer covered with a non-adherent dressing.
- Firm compression bandages (up to 4 layers) are applied to the affected leg, from the toes to below the knee. Again, this counters the venous hypertension. The bandages are changed initially at weekly intervals, but as healing progresses and the amount of oozing is reduced the intervals between dressings can be increased.
- She is advised to keep the leg elevated whenever possible – in bed at night and when sitting during the day. The foot should be higher than the knee, the knee higher than the hip. This eliminates the venous hypertension in the leg during the hours the leg is elevated and allows ingress of oxygenated blood.

- Walking and regular exercise are encouraged; smoking should be stopped.
- A split-skin graft can be applied if the ulcer remains indolent.
- Once the ulcer is healed, elastic stocking support is mandatory to prevent the very real risk of recurrence.

