Case 29 Another leg ulcer

Figure 29.1

This 69-year-old lady has had her ulcer of the left leg treated for many months by the district nurse using conventional bandaging. As it showed no signs of healing – indeed, if anything it seemed to be getting worse – she was referred to the vascular clinic at her local hospital. Here she gave a history of left calf pain on walking. This had been present for about a year and she was now only able to limp about 50 yards before having to stop and rest because of the pain. However, she put this down to the presence of the ulcer. She had no problems with her right leg, gave no history of angina or of transient ischaemic attacks (TIAs), but did admit to being a 'life-long' cigarette smoker.

On examination, the ulcer had sloping edges and a necrotic base (as shown in Fig. 29.1). The left foot was colder than the right, the toes were blue and Buerger's test (see p. 48) was positive. There were no varicose veins on either leg. All the pulses could be detected in the right leg but only the femoral pulse was present on the left.

What is your clinical diagnosis?

An arterial ulcer due to arteriosclerotic disease with occlusion of the left superficial femoral artery.

Why the calf pain on walking?

This is classical calf claudication pain due to muscle ischaemia.

How can a Doppler ultrasonic probe be used to help confirm the diagnosis?

It is used in conjunction with a sphygmomanometer to compare the arm systolic blood pressure with that obtained in the leg. (A special long cuff must be used to take the blood pressure in the lower limb.) There will be a considerable lowering of the ankle blood pressure compared with the brachial pressure (the ankle–brachial pressure index, ABPI). Indeed, 'critical ischaemia' is defined as an ankle systolic pressure that is lower than 50% of the brachial pressure (ABPI < 0.5), although the presence of tissue loss (the ulcer) also signifies that the ischaemia is 'critical'. Sure enough, this was so in the present case.

What other investigation is required?

She requires further investigation by means of a femoral arteriogram to delineate the arterial tree in the left leg. We need to know if there is a stenosis or total occlusion and whether or not there is an adequate run-off (Fig. 29.2). This will allow reconstruction of the vascular tree, either by a balloon angioplasty, with or without a stent, or surgical reconstruction, using a saphenous vein graft. If there is a totally inadequate run-off, she may well come to amputation of the left leg.

Revise the differential diagnosis of the causes of leg ulcers

See the list on p. 58, Case 28.

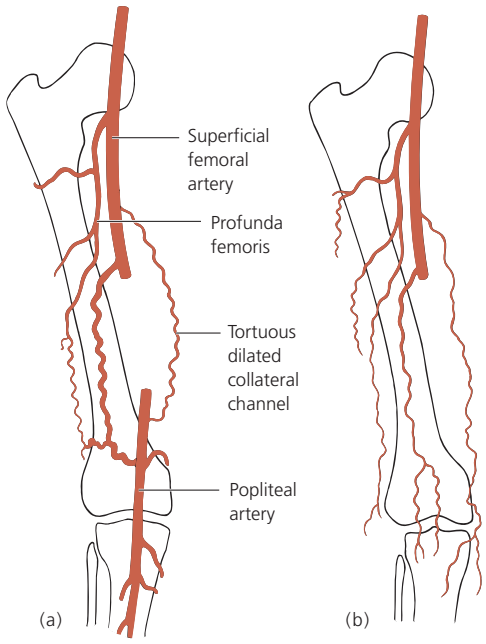

Figure 29.2 Tracings of arteriograms. (a) An example of a good run-off with a patent popliteal artery; this is suitable for reconstructive surgery. (b) The main arterial tree is obliterated and reconstruction cannot be carried out.