Separation of gangrene

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A zone of demarcation between the truly viable and the dead or dying tissue will eventually appear. Separation is achieved by the development of a layer of granulation tissue, which forms between the dead and the living parts. In dry gangrene, if the blood supply of the proximal tissues is adequate, the final line of demarcation appears in a matter of days and separation occurs neatly and with the minimum of infection. If bone is involved, complete separation takes longer than when soft tissues alone are a ff ected, and the stump tends to be conical as the bone has a better blood supply than its coverings. In moist gangrene the infection and suppuration extend into the neighbouring living tissue, causing the final line of demarcation to be more proximal than in dry gangrene. If the arterial supply to the proximal living tissue is poor, the line of final demarcation is very slow to form or does not develop at all. Unless the arterial supply can be improved, the gangrene will spr ead to adjacent tissues or will suddenly appear as ‘skip’ areas further up the limb. These skip lesions may occur on the other side of the foot, on the heel, on the dorsum of the foot or even in the calf. Infection may also cause gangrene to spread proximally into areas of extensive inflammation. Local amputation in the presence of poor circulation will fail and gangrene will reappear in the wound or skin edges.

Figure 61.24 This patient presented with an ischaemic right hand. (a) A chest radiograph demonstrated a right cervical rib (black arrow). (b) A computed tomography angiogram showed stenosis of the subclavian artery

(SCA) with poststenotic dila

tation (lined with thrombus) (white arrow) caused by the cervical rib. The patient had been embolising from the SCA into the hand. The patient was successfully treated with cervical rib resection, repair of the SCA and distal thromboembo

lectomy. Figure 61.25 The superior mesenteric artery lesion shown in 61.1 . It was successfully treated with angioplasty and primary stent insertion.

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