The consequences of breakdown of the wound after surgery to tendo Achillis are considerable. Complex surgery is often required to reconstruct the tendon and to provide soft-tissue cover. We describe a new incision which approaches the tendon by using a distally-based fasciocutaneous flap. This reduces the risk of breakdown of the wound since it avoids making an incision directly over the tendon, provides good exposure, and maintains the vascularity of the skin overlying the tendon.

**Illustrative case reports**

**Case 1**. A 51-year-old man presented with a rupture of the right tendo Achillis sustained while playing basketball one week earlier. He underwent surgery using a distally-based fasciocutaneous flap and the tendon was repaired with 2/0 prolene. He had an uneventful postoperative recovery. At the follow-up at six months he was fully mobile, although he had a slightly hypertrophic scar at the medial malleolus.

**Case 2**. A 45-year-old man presented with a rupture of his left tendo Achillis which he had sustained one month earlier. He underwent surgery using a distally-based fasciocutaneous flap and the tendon was repaired with 2/0 prolene. His postoperative recovery was uneventful. Seven months after surgery the scar had healed and he was walking normally.

**Case 3**. A 25-year-old man had suffered a crush injury to his right foot and ankle ten years earlier which had remained untreated. He presented with a plantar flexion deformity of his right foot and was only able to walk on tiptoe. Examination revealed a shortened and contracted tendo Achillis. Radiographs revealed no bony abnormality. He underwent surgery to lengthen the tendon. An incision was made using the distally-based fasciocutaneous flap. The tendon was exposed, lengthened using a Z-plasty, and repaired with 2/0 prolene. After correction of the plantar flexion deformity there was an area of skin deficiency. The well-vascularised flap covered the repair. Proximally, wound closure was achieved by using a split-thickness skin graft (Fig. 3). Postoperatively, he made an uneventful recovery with satisfactory healing of the tendon and wound. At follow-up six months later, he was walking normally (Fig. 4).

**Discussion**

Surgery to tendo Achillis may be complicated by postoperative wound problems which include infection, dehiscence,
formation of a sinus and necrosis of the skin and tendon. After repair of an acute rupture, wound complications have been reported in between 13% and 30% of patients. Such complications contribute significantly to morbidity and may require antibiotic treatment and debridement. In severe cases, reconstruction is required with a flap and many types have been described.

Paramedian incisions lie directly over the tendon. The risk of exposure of the tendon is high in the event of wound complications. An S-shaped incision which crosses the midline has been described, but has similar disadvantages. Percutaneous and endoscopic approaches to the tendon have been advocated. These are more suitable for the repair of acute ruptures as a wide exposure is required for tendon-lengthening procedures.

Since the first description by Pontén, fasciocutaneous flaps have been widely used in the reconstruction of defects of the lower limb. Many authors have recommended distally-based fasciocutaneous flaps to obtain cover of distal defects in the lower limb. In an effort to reduce complications, we have used the principle of a distally-based fasciocutaneous flap for the surgical approach to tendo Achillis. An incision adjacent to the tendon is avoided and wide exposure is achieved. This approach is as appropriate for the repair of an acute rupture as it is for chronic disorders. The flap is distally based in order to avoid a transverse incision directly over the site of the repair. A further advantage is that an incision over the shoe-bearing area of the heel is avoided.

In an acute rupture direct closure of the wound can be achieved, but in the presence of fixed plantar flexion there may be a skin deficiency after correction and a skin graft may be required. The design of the fasciocutaneous flap allows this graft to lie distant from the site of repair of the tendon so that it should heal satisfactorily.

The distally-based fasciocutaneous flap gives a versatile and safe approach to surgery to tendo Achillis and can minimise the morbidity which is associated with wound complications.

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References


