TRAUMATIC SPASM OF THE POSTERIOR TIBIAL ARTERY AT THE ANKLE

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Traumatic arterial spasm as a complication of fractures, gunshot wounds and crush injuries has been well recognised during the last fifteen years. It has been uncommon, however, to find traumatic arterial spasm distally in the hand or foot and the case now reported is of interest from this point of view. Cohen in a large series of cases was able to recall only one similar example.

CASE REPORT

A farm stockman aged nineteen was rounding a corner on his motor cycle when he found a broken-down car across the road. He brushed against the car as he passed it and the inner side of his left ankle was crushed against the chain case of his motor cycle.

He was admitted to hospital one hour after the accident. His general condition was good. He stated that he had walked on the foot after the accident and although it felt rather numb and dead he did not notice any other untoward symptoms.

Examination of the foot revealed a ragged open wound with loss of skin over the inner side of the ankle; one end of a severed tendon was projecting from the wound. There was a striking colour change in the medial three toes; they were blue, cold, and insensitive to pin prick. There was a fairly sharp line of colour change and sensitivity at about the level of the metatarsal heads (Fig. 1).

Operation—Under general anaesthesia the foot was thoroughly cleaned and the wound inspected. There was a fracture of the medial malleolus and the tibialis posterior tendon was found severed at the same level. The neurovascular bundle was carefully exposed; the two veins were normal, but the posterior tibial artery narrowed suddenly to a mere thread precisely at the level of the fracture. The posterior tibial nerve was intact (Fig. 2).
artery was followed to the point at which it disappeared beneath the abductor hallucis; it was in spasm as far as it could be traced. It was carefully dissected out and stripped of its coverings, with a consequent slight increase in calibre, but there was no return of pulsation. One per cent procaine was injected around the vessel. This produced a slight further improvement in calibre, but still there was no pulsation. Procaine was therefore injected intra-arterially, and the injection was followed immediately by dilation of the vessel and pulsation throughout its visible length. The severed tendon was repaired. The wound was dressed but left open, and a padded plaster was applied with the foot inverted. The plaster was split immediately after its application. As the plaster was being trimmed (about fifteen minutes after the intra-arterial injection) there was a sudden pink flush in the area previously discoloured.

**Progress** There was severe swelling and slight impairment of sensation in the toes for several days after the operation, but the circulation was never in question. The wound was later grafted successfully with split skin. Six months after the accident the patient has an almost normal foot and is back at work.

My thanks are due to Miss Janet Seaton for the beautifully executed drawings.

**REFERENCE**