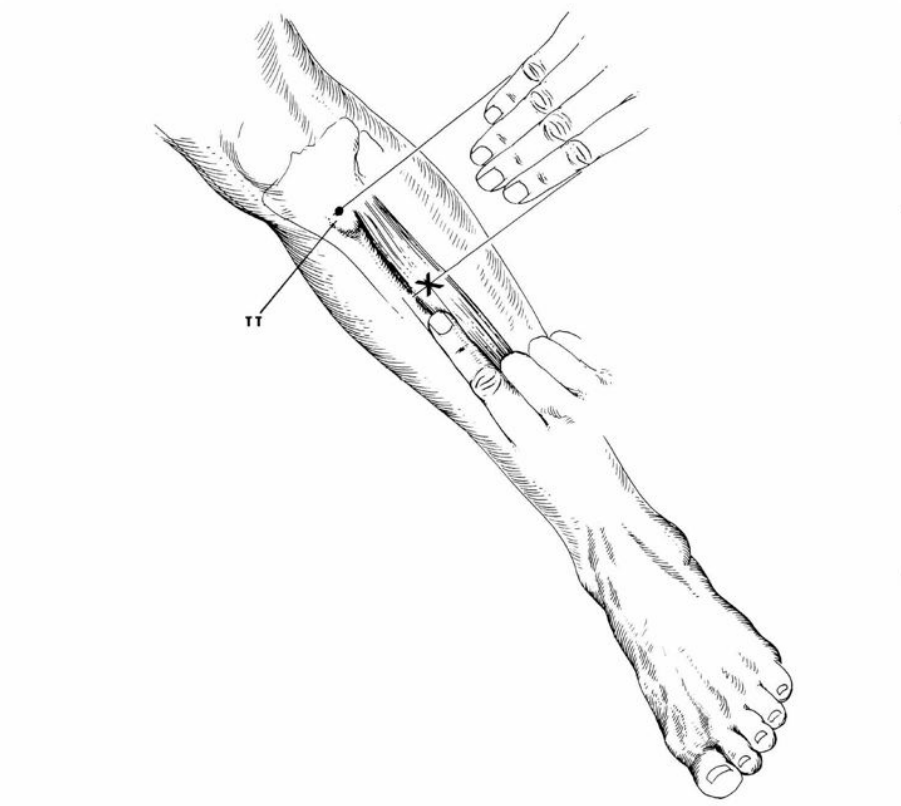
TIBIALIS ANTERIOR



Innervation

Deep Peroneal Nerve, Common Peroneal Nerve, Sciatic Nerve, Posterior Division Sacral Plexus, L4, L5.

Origin

From the lateral condyle and the proximal two-thirds of the shaft of the tibia.

Insertion

On the first cuneiform and the base of the first metatarsal.

Position

The patient supine.

Electrode Insertion (X)

Four fingerbreadths below the tibial tuberosity (TT) and one fingerbreadth lateral to the tibial crest.

Test Maneuver

Patient to dorsiflex the foot.

Pitfalls

If the electrode is inserted too laterally and too deeply it will be in the extensor digitorum communis.

Comments

(a) First muscle innervated by the deep peroneal nerve.
(b) Involved in lesions of:
    1. Deep peroneal nerve
    2. Common peroneal nerve
    3. Sciatic nerve
    4. Sacral plexus
    5. L4, L5 roots.
(c) When this muscle gets paralyzed, the foot drops into plantar flexion. When the patient tries to walk he has to bring the knee of the affected side high in order to clear to floor. This type of gait is called "high stepping gait" and the condition is usually called "foot drop."
(d) This muscle may be severely involved in "anterior compartment syndrome" which is an increased edema in the muscle and a hypertension in the osteoaponeurotic compartment. Under these conditions, the amount of blood flowing into the muscle is much reduced and the muscle may either get totally paralyzed or severely weakened.

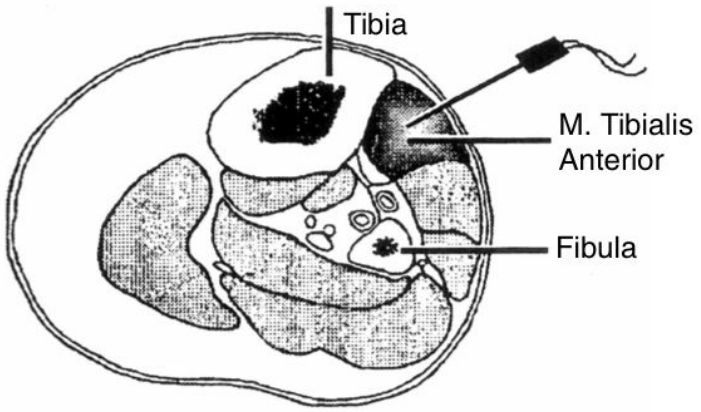


Figure 64. Cross section of the leg through the junction of the upper and middle third.