Q6 – Muscles of Anterior Compartment of Leg

Definition Note

> The anterior compartment of the leg is a closed osteofascial compartment situated on the front of the leg. It contains muscles mainly responsible for dorsiflexion of the ankle and extension of the toes. These muscles are supplied by the deep fibular (peroneal) nerve and vascularized by the anterior tibial artery.

Introduction

The leg is divided into four compartments by intermuscular septa and deep fascia. The anterior compartment lies in front of the interosseous membrane and plays a vital role in normal gait by allowing clearance of the foot during walking.

Boundaries of Anterior Compartment

Anteriorly – deep fascia of leg. Posteriorly – interosseous membrane, tibia and fibula. Medially – lateral surface of tibia. Laterally – anterior intermuscular septum.

Contents of Anterior Compartment

The anterior compartment contains four muscles: tibialis anterior, extensor hallucis longus, extensor digitorum longus, and fibularis tertius. It also contains the deep fibular nerve and anterior tibial artery with accompanying veins.

Muscles of Anterior Compartment

Tibialis anterior produces dorsiflexion and inversion of the foot. Extensor hallucis longus extends the great toe. Extensor digitorum longus extends the lateral four toes. Fibularis tertius assists in dorsiflexion and eversion of the foot.

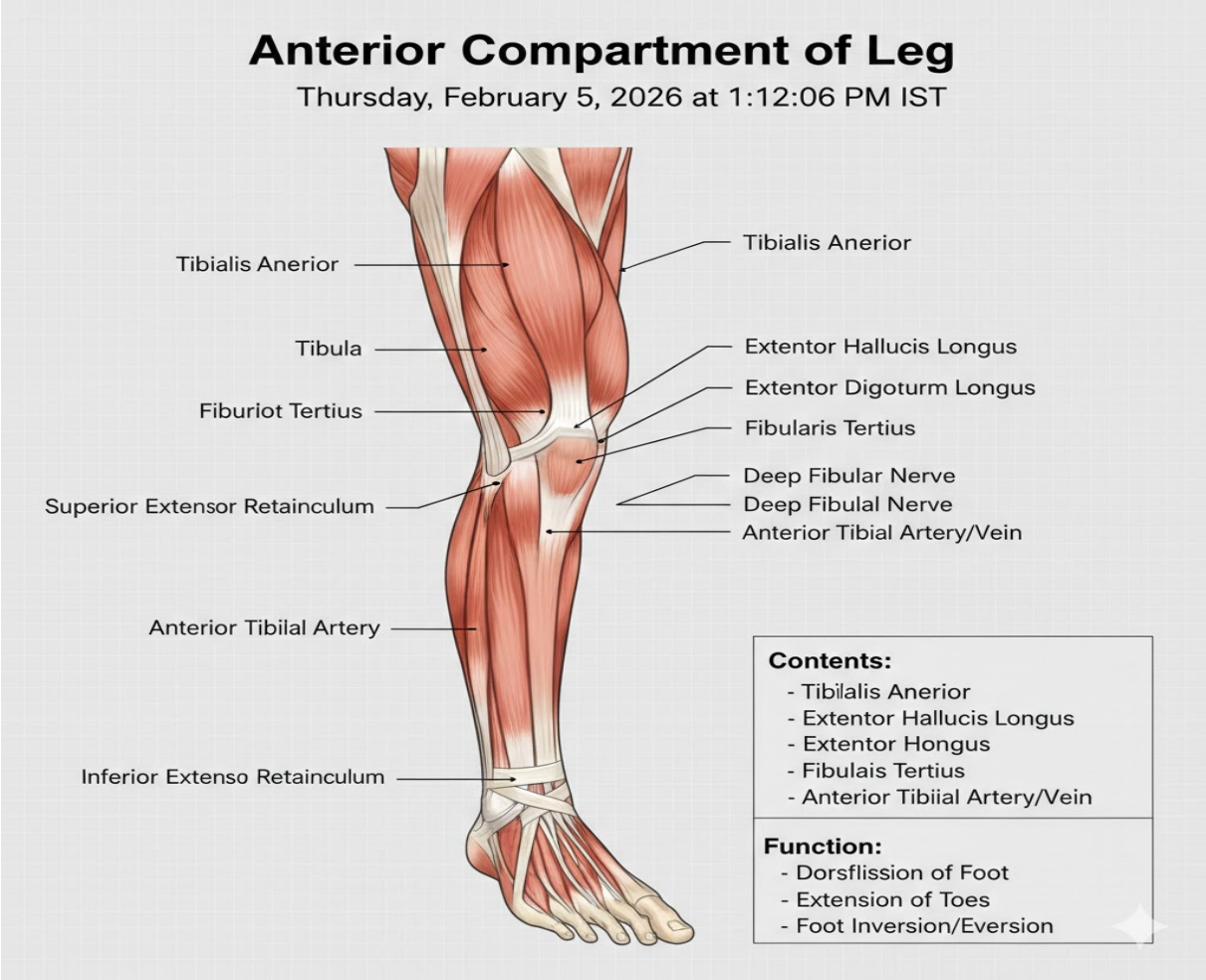
Nerve and Blood Supply

All muscles of the anterior compartment are supplied by the deep fibular (peroneal) nerve. The anterior tibial artery supplies this compartment.

Clinical Importance

Injury to the deep fibular nerve causes foot drop. Anterior compartment syndrome may compromise circulation and nerve supply.

Labeled Diagram – Muscles of Anterior Compartment of Leg



Conclusion: The anterior compartment of the leg contains muscles essential for dorsiflexion of the ankle and extension of the toes. These muscles are supplied by the deep fibular nerve and anterior tibial artery. This knowledge is important for anatomy examinations and clinical practice.