The stabilizing role of the lateral ligament complex around the ankle and subtalar joints

Abstract: The stabilizing role of various ligaments in the lateral side of the ankle and hindfoot was examined experimentally and sequentially using 10 fresh amputated lower limbs. The anterior talofibular ligament contributed to ankle stability in plantarflexion and the calcaneofibular, the fibulotalocalcaneal, and posterior talofibular ligament in all positions. The lateral root of the inferior extensor retinaculum contributed to subtalar stability in neutral and dorsiflexion. The calcaneofibular, fibulotalocalcaneal, and cervical ligaments and the ligament of the anterior capsule of the posterior talocalcaneal joint and the interosseous ligaments contributed to subtalar stability in all positions. The subtalar joint accounted for upward of 50% of ankle/hindfoot inversion after ligament division in the intermalleolar plane.