The objective of this investigation was to determine if a blinded physical therapist could predict the absence or presence of a syndesmotic screw in a group of patients following ankle ORIF.

Methodology

At our institution (The Temple University Foot and Ankle Institute, Philadelphia, Pennsylvania) we have a board-certified physical therapist (SJP) who specializes in the foot/ankle. Over time it has been his clinical experience that patients with an ankle ORIF involving static syndesmotic screw fixation generally have a rigid or firm "end feel" into ankle dorsiflexion with additional significant restriction of posterior talar glide with accessory mobility testing. Other components of his standard physical assessment of post-operative ankle fractures includes active range of motion measurements, manual muscle testing, gait analysis, wound assessment, limb circumferences, assessment of potential secondary complications (biphalen knock, intrinsic flexor/extensor inhibition, stiffness), and completion of the Foot Function Index.

In order to assess whether he could accurately predict the presence or absence of static syndesmotic fixation, we had him perform his standard initial assessment on consecutive patients following ankle ORIF. He was blinded with respect to the fracture mechanism, fixation construct, and the presence/absence of a syndesmotic screw. As a result he was blinded to whether the patient had a syndesmotic screw. As a result, he was unable to correctly predict the presence or absence of a syndesmotic screw based on his physical examination.

The results of this investigation provide evidence as to the clinical assessment and function of the ankle joint with and without static syndesmotic screw fixation. Despite a level of clinical confidence, we were unable to correctly identify the next 12 consecutive patients in order to reach statistical significance greater than chance.