

Ankle Syndesmosis Fixation System

Researchers at the University of South Florida have developed a novel ankle syndesmosis fixation system that can be used in the treatment of complex ankle fractures. This system allows for better fixation of these injuries with increased stabilization, less surgical time, and decreased technical difficulty.

The ankle joint is composed of the tibia, fibula, and talus bones. A broad ligament, known as the ankle syndesmosis, is present between the tibia and fibula just above the ankle joint. In complex ankle fractures, there is potential for this ligament to be disrupted. In these cases, the syndesmosis must be reduced in order to restore the correct positioning of the ankle joint. The following invention provides optimum fixation for the ankle syndesmosis.

The existing methods used for ankle syndesmotic fixation are Transmalleolar Screw Fixation and the Arthrex Tightrope Syndesmotic Fixation System. Our system is knotless, while current systems require 4-5 knots in the fiberwire leaving bulky suture to close tissues over. Additionally, only the tibia is drilled compared to the current systems which drill through both the fibula and tibia. This novel system also minimizes the loss of the tensioning through mechanical tightening of fiberwire suture.

This invention has direct applications in the field of orthopedic medicine and surgery.

ADVANTAGES:

- Allows for better fixation in ankle injuries
- Increased ankle stabilization
- Less surgical time and decreased technical difficulty

Novel System for The Treatment of Ankle Fractures

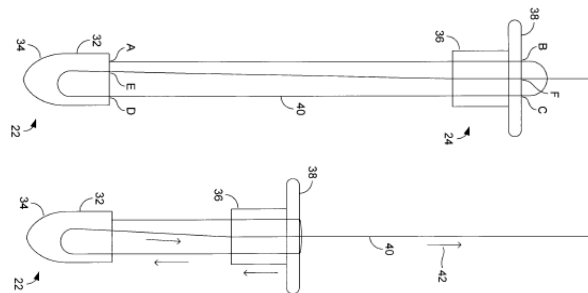


Fig 1: Components of ankle syndesmosis fixation system

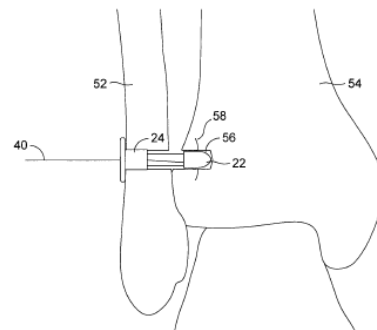


Fig 2: Ankle syndesmosis fixation using the novel system