Syndesmotic Reduction:
Why does it matter; how can you tell and is there a role for arthroscopy?

Matthew M. Buchanan, MD
(Arlington, Virginia)

Why does it matter?
Anatomic Reduction ensures stability of the talus in the mortise.
Malreduced Syndesmosis leads to Early Arthrosis and Poor Clinical Outcome:
As little as 1mm of lateral displacement in the fibula reduces the
tibiotalar contact area in weight bearing by 42%. 1

How can you tell?
Direct Visualization (currently the best method)
Mini C-Arm:
May miss up to 30 degrees of External Rotation Malreduction 2
Radiographic Parameters (consider comparing with normal side):
   Medial Clear Space
   Tibiofibular Clear Space at Incisura Fibularis (fibular recess)
   Tibiofibular Overlap
Stress Radiographs:
   External Rotation and Abduction
Manual Tests
   Hook Test/Cotton Test

Is there a role for arthroscopy?
Acute Injuries:
   100% incident of cartilaginous lesion in Lauge-Hansen Pronation-Eversion 4 fractures. 3
Chronic Injuries:
   Syndesmotic Impingement
      Inferior fascicle of the AITFL is called the accessory AITFL
      ligament and can be a source of pathologic impingement. 4
Arthroscopic resection of:
   Torn portion of interosseous ligament
   Chondroplasty for cartilage lesions (often posterolateral tibial plafond) 5

References:

