Summary and conclusion

The 3 major contributors to stability of the ankle joints are (1) the congruity of the articular surfaces when the joints are loaded, (2) the static ligamentous restraints, and (3) the musculotendinous units, which allow for dynamic stabilization of the joints **(Hertel, 2002).**

Whenever a fracture of the malleolus is seen on standard views of plain x-rays, it is important to ask "what is the associated ligament injury?" **(Solomon et al., 2001).**

Stress radiography is a reliable method for accurate, distinct diagnosis of ligamentous instability of the ankle. If stress tests of the ankle are negative, then some occult internal derangement other than ligamentous instability may be causing pain and disability such as occult avulsion fracture and osteochondritis dissecans of talus **(Canale et al., 2008).**

Arthroscopy is a helpful diagnostic tool in verifying post-traumatic ankle instability. M.R.I. can also help to establish the diagnosis of ankle ligament injuries and to give detailed information regarding chondral surfaces periankle tendon integrity **(Bucholz et al., 2006).**

Injury to the distal tibiofibular syndesmosis occurs secondary to an external rotation force and may be associated with ankle fracture. The concomitant presence of deltoid injury is an important factor leading to instability of the ankle joint. Radiographs may demonstrate signs of syndesmotic injury, such as increased tibiofibular clear space, decreased tibiofibular overlap, and increased medial clear space. Routine intraoperative stress testing is recommended for detection of syndesmotic

instability. Intraoperative evidence of syndesmotic diastasis after rigid fixation of the medial malleolus and fibula fractures warrants syndesmosis fixation. The proper tibiofibular relationship should be restored and maintained by screw fixation until healing of the syndesmotic ligaments is achieved. Satisfactory clinical outcome is associated with adequate reduction and stabilization of the syndesmosis **(Zalavras and Thordarson 2007).**

The evidence suggests that functional rehabilitation should be the treatment of choice for acute injuries, with acute anatomic repair reserved for high-demand athletes. The initial management of chronic ankle instability is a program of functional and prophylactic rehabilitation. Failed rehabilitation is an indication for surgical repair. The results of anatomic repair seem favorable compared with those of nonanatomic tenodesis reconstruction, which is associated with higher rates of sural nerve and wound complications. The role of anatomic reconstruction with autograft and allograft continues to be investigated **(Maffulli and Ferran 2008).**

In preoperative planning MR imaging is helpful in the diagnosis of associated injuries such as osteochondral lesions, intra-articular loose bodies, anterolateral soft tissue impingement, and peroneal tendon injuries **(Alparslan and Chiodo 2008).**

Anatomic reconstruction of the lateral ankle ligaments can be regarded as the surgical treatment of choice in patients who have ankle instability. Arthroscopy-assisted treatment of post-traumatic ankle instability is an effective method **(Krips et al., 2006).**

Anatomic repair of the lateral-ligament complex supplemented with the Gould modification has become the preferred method of surgical treatment, with an 85% to 95% success rate. An ankle-reconstruction procedure using tendon augmentation should be reserved for patients with generalized ligamentous laxity or long-standing ligamentous insufficiency or as a salvage procedure in an individual with a failed modified Broström lateral-ligament repair **(Baumhauer and O'Brien 2002).**

A high index of suspicion is required for early diagnosis of osteochondral lesions of the talus. Chronic ankle pain and functional impairment may result from injuries of the subchondral bone and subsequent degeneration of the articular surface. Early and stable lesions (stage I or II) may be treated conservatively, while more severe lesions (stage III to V) may require surgical intervention **(Chew et al., 2008).**