Anatomical Lateral and Medial Ligament Reconstruction in Rotational Chronic Ankle Instability

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**Introduction/Purpose:** Rotational (combined lateral and medial) chronic ankle instability (CAI) can present with pain and tenderness at the ankle joint, and can be associated with feeling of giving way, repetitive sprains, and life quality limitation. In case of surgery, anatomical reconstruction of the ligaments and treatment of comorbidities are essential for a solid outcome.

**Methods:** A retrospective chart review of 81 rotational CAI patients (average age: 35.3 years, age range: 16-64; right sided: 41(50.6%); left sided: 40(49.4%)) was performed. The average latest follow-up visit was 10.8 months (range: 3-47 months). The patients underwent in our center a standardized surgical treatment protocol. Following diagnostic ankle arthroscopy, a combined lateral and medial anatomical ligament reconstruction was performed. Hindfoot realignment procedures and treatment of associated pathologies (such as talar osteochondral lesions) were carried out at the same time. Postoperatively, all patients were mobilised with partial weight bearing (15kg) for six weeks in an Aircast walker ® (DJO, LLC, USA). Adequate postoperative analgesia and physiotherapy were initiated.

**Results:** Combined lateral and medial ligament reconstruction without additional surgeries was performed in 20 cases (24.7%). In the other cases, to address associated pathologies, additional surgeries were performed, such as: lateral calcaneal lengthening osteotomy (LCO) in 42 cases (51.9%), medial sliding calcaneal osteotomy (MSCO) in 3 Cases (3.7%), osteochondral lesion reconstruction in 20 cases (24.7%), peroneal tendon pathology treatment in 3 cases (3.7%), cavovarus foot correction in 1 case (1.2%), supramalleolar osteotomy in 1 case (1.2%), and calcaneonaviculbar coalition excision in 1 case (1.2%). The outcome variables will be presented at the conference.
**Conclusion:** Anatomical lateral and medial ligament reconstruction of rotational CAI is a safe surgical treatment and leads to a favourable outcome. Beside the ligament reconstruction, associated comorbidities, as malalignment, osteochondral lesions, and others, have to be addressed at the same surgery to achieve physiological biomechanics and a complete pain relieve.