Deltoid Ligament

Reconstruction: Clinical Outcomes

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No Conflict to Disclose

• Deltoid Ligament Reconstruction: A Novel Technique

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The authors have no potential conflict with this presentation
Deltoid Ligament Injury

• If Sprain: 6 weeks in boot with Active ROM exercise program

• If Rupture: Surgery

• Surgery for Rupture: The authors use ‘Hammock Procedure’

• Hammock procedure with a Peroneus Longus autograft to repair the Deep Deltoid if no Deep Deltoid stump found at the time of surgery

• Scoping ankle first to check for condition of rupture and Syndesmosis
Deltoid Ligament Reconstruction

• Different techniques reported in literature (1, 2, 3)

• We report on our ‘Hammock’ technique
‘Hammock’ Technique

• 3.5 anchor inserted into the talus at foot print of the deep deltoid ligament and sutures passed in ligament stump

• Sutures then passed in an osseous tunnel in medial malleolus
‘Hammock’ Technique

• The Superficial Deltoid is repaired by placing 2-3 stay non absorbable sutures at the inferior, anteroinferior ends

• Sutures are then tied around a cancellous screw and washer inserted into the distal tibia, 1.5cms above the joint line

• The tension of the sutures is dictated by the screw similar to a Hammock
‘Hammock’ Technique

Tensioning takes place with the ankle/foot in a 90 degree neutral hindfoot position.
Chronic Deltoid Insufficiency

Hammock procedure can also be married with medial displacing calcaneal osteotomy if associated pes planus or lateral ankle joint osteoarthritis.
Methods

• 61 Deltoid ligament reconstructions were performed in the acute setting and 24 in the chronic setting (of which 7 had an additional medial displacing calcaneal osteotomy)

• All patients were followed-up for a period of 1 year

• Primary outcome was time to return to sport

• This study was performed in St. Vincent hospital – Dublin, Ireland
Results

• 100% of patients receiving deltoid ligament reconstruction in the acute setting returned to sports within 3.5 months

• In the chronic setting, 95.8% of patients returned to sports at the 6 months interval with no issues

• 1.8% had excessive scaring requiring arthroscopic debridement
Conclusion

• ’Hammock’ technique is an effective procedure for the treatment of both acute and chronic deltoid ligament tears with excellent satisfaction rates and early return to sports
References

