JOINT PRESERVING SURGERY USING SUPRAMALLEOLAR OSTEOTOMY IN ANKLE OSTEOARTHRITIS

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Introduction: Supramalleolar osteotomy is a joint-preserving surgical treatment option for patients with ankle osteoarthritis. The aim of this procedure is to restore biomechanics and redistribute the loads on the ankle joint, thus improve clinical outcome and halt degenerative progression. We report a case of joint-preserving surgery using open-wedge supramalleolar osteotomy in a patient with post-traumatic ankle joint osteoarthritis.

Discussion: A 50-year-old gentleman presented with persistent right ankle pain since injury to his right ankle 8 years ago. He sustained anterior tibiofibular ligament (ATFL) tear with subchondral injury right ankle joint. He has undergone multiple repair, corrective surgeries and viscosupplement injections throughout the years. Despite the pain, he has no ankle instability, no history suggestive of infection. On physical examination, there was tenderness over the anterior ankle joint, limited dorsiflexion of ankle, and no signs of infection. Plain radiograph showed subchondral sclerosis, osteophytes formation and obliteration of medial joint space. MRI right ankle revealed osteochondral lesion over both medial and lateral talar dome with complete lateral ankle ligaments torn. Open wedge medial supramalleolar osteotomy was performed to realign the mechanical axis and stabilized with locking plate. Bone graft in the form of bone block and demineralized bone matrix was packed at the osteotomy site. Proceeded with modified Brostrom Gould procedure to reconstruct the lateral ankle ligaments. Lastly, hyaluronic acid and platelet-rich- plasma (PRP) injection was performed. Surgery was uneventful and patient was discharged well post operation.

Conclusion: Supramalleolar osteotomy has been shown to have promising clinical and radiological outcome in patients with ankle arthritis. Open-wedge osteotomy is preferred as it allows surgeon to performed gradual correction in multiple planes and still able to achieve fast bone union.