2:20 pm
Ankle Arthroscopy: Medium-Term Outcomes for New Onset Mechanical Symptoms in Osteo and Post-Traumatic Arthritis

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Summary:
Ankle arthroscopy can be an effective tool in reducing pain and maintaining function in patients with a new mechanical symptom in the setting of osteo or post-traumatic arthritis. Our study demonstrates decreased pain, high patient satisfaction rates and a relatively low rate of further surgery in this population.

Introduction:
Ankle arthroscopy is a common procedure that has been utilized in the evaluation and treatment of a variety of pathology. No studies have examined the results of arthroscopy in patients presenting with a new onset mechanical symptom in the setting of osteo or post-traumatic arthritis. We hypothesize that ankle arthroscopy performed in these patients with a new mechanical symptom and osteo or post-traumatic arthritis will result in decreased pain, increased function and a high level of patient satisfaction. Additionally, we hypothesized that more limited pain relief will be observed in patients with more severe arthritis.

Methods:
Between 1999 and 2007, 304 consecutive ankle arthroscopies were performed by a single Foot and Ankle fellowship trained orthopaedic surgeon at a tertiary academic center. All patients underwent identical intra-operative protocol with respect to noninvasive ankle distraction technique and arthroscopic portal placement. Patients agreeing to study participation completed a visual-analog scale, Foot & Ankle Ability Measure, SF-36 and a subjective questionnaire. Prospective data from medical record review was collected when possible, and pre and post-operative ankle radiographs were assessed when available.

Results:
54 patients were identified with a post-operative diagnosis of either osteo or post-traumatic arthritis. 12 were unable to be contacted or deceased. Complete follow-up information was obtained for 23/42 (55%) patients at an average of 7.9 years (range 5-12). 12 had a diagnosis of post-traumatic arthritis and 11 had osteoarthritis. 15 patients had an arthroscopically demonstrated OCD lesion and 13 had a loose body. 8 patients had Kellgren-Lawrence (KL) Grade 1/2 Arthritis and 10 had Grade 3/4. VAS Pain scores decreased from 7.4 preoperatively (obtained prospectively) to 2.4 post-operatively (p<0.0001). Patient satisfaction scores were high, with 83% of respondents indicating a willingness to undergo surgery again should symptoms return. 87% reported ongoing brace wear, with about 1/3 using a brace daily and 1/3 using it for work. Seven patients reported additional surgery during the follow-up period: 4 repeat arthroscopy and 3 tibiotalar fusions. FAAM ADL subscale score was 70% ± 12%. SF-36 scores...
demonstrated significant decreases versus age-matched controls on all physical and 2 of 4 emotional subscales. Subgroup analysis of KL Grade 1/2 versus KL Grade 3/4 demonstrated statistically significant decreases between pre and post-operative pain in both groups, though 50% of patients with Grade 3/4 arthritis required further surgery during the follow-up period.

**Conclusion:**
Ankle arthroscopy is a viable surgical option in patients with new onset mechanical symptoms and arthritis, particularly when a shorter recovery time is desired. Our study demonstrates decreased pain, high patient satisfaction rates and a relatively low rate of further surgery. This suggests that with proper patient selection (i.e. presence of a new onset mechanical symptoms) ankle arthroscopy affords this patient population a reasonable opportunity at pain relief for an extended period of time. Patients should be counseled, however, that arthritis is progressive and our data demonstrates that ongoing functional limitations remain.