

Low-Flow Ankle Arthroscopy for Gunshot Wounds With Retained Intra-Articular Ballistic

Paul Alvarez, James Gallagher, Christian Curatolo, Kevin D Martin

Introduction

Gunshot injuries of the foot and ankle can result in unique and challenging situations for orthopaedic surgeons. The foot and ankle have limited soft-tissue coverage and highly congruent joint spaces, leading to injuries that often are intra-articular with substantial tissue loss. These injuries often are confounded by feet shod in footwear that is pulled into the path of the missile and corresponding tissue. This video presents the short-term outcomes of the management of foot and ankle gunshot wounds using low-flow arthroscopy.

Methods

A retrospective study of three consecutive patients who underwent treatment for foot and ankle gunshot wounds with retained intra-articular ballistics using low-flow arthroscopy from January 2021 to February 2022 was performed. Patient demographics, the presence of underlying fractures, perioperative complications, and radiographic findings were collected.

Results

The mean patient age of the cohort was 37.3 years (range, 24 to 58 years). All the patients were men, with 66.7% reporting a history of tobacco use. The mean follow-up was 260 days. All the patients sustained a low-velocity gunshot wound to the foot or ankle. Two patients sustained an underlying fracture, requiring open reduction and internal fixation at the time of the index procedure, which was completed via an all-arthroscopic technique. All patients reported improvement in function postoperatively, with ability to return to work full time. No patients had evidence of infection requiring management with oral antibiotic agents or returned to the operating room for any reason.

Discussion and Conclusion

Short-term results indicate that low-flow arthroscopy for the management of lower extremity gunshot wounds of the foot and ankle is a safe and effective treatment option for completion of foreign body removal, irrigation and débridement, and management of underlying fractures (if present).