Intra-Articular Block Compared with Conscious Sedation for Closed Reduction of Ankle Fracture-Dislocations. A Prospective Randomized Trial

Reference:

Scientific Literature Review

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**Podiatric Relevance:** Dislocated fractures of the ankle require immediate reduction to reduce the potential for neurovascular compromise, as well as provide the potential for improved intraoperative fixation. This article attempts to provide evaluation for the most effective and safest method of reduction.

**Methods:** Forty-two patients with ankle fracture-dislocations were enrolled in a prospective randomized study to evaluate the effectiveness and pain experienced with fracture reduction and posterior splint placement. Conscious sedation included a combination of benzodiazepines and narcotics (propofol, midazolam, morphine, or fentanyl), and the ankle block consisted of 12 mL of 1% lidocaine without epinephrine injected with sterile technique into the ankle joint in a hematoma block fashion. Twenty-one patients received conscious sedation and twenty-one patients underwent intra-articular lidocaine block. After reduction, patients were asked to rate their pain using a visual analog pain scale prior, during and after reduction.

**Results:** The study illustrated no significant difference in pain experienced between local anesthesia and conscious sedation. Acceptable reduction was achieved in both groups, radiographically confirmed, with the exception of one in the conscious sedation group. Pain reduction and provided analgesia were similar in both groups and without significant difference. Average time to reduction with splint application was less in the local block group than for the sedation group (63.8 minutes versus 81.5 minutes).

**Conclusions:** Local anesthetic blocks of ankle fracture-dislocations provide a similar degree of analgesia when compared to conscious sedation, and in general consist of less risk. The study identifies short comings in that conscious sedation techniques were inconsistent, but overall provides evidence that during reduction maneuvers, a hematoma ankle block is as effective in pain reduction as conscious sedation.