Intra-Articular Block Compared with Conscious Sedation for Closed Reduction of Ankle Fracture-Dislocations

Reference:

Scientific Literature Review

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Podiatric Relevance:
This study compares intra-articular block with conscious sedation for pain control in patients undergoing closed reduction of ankle fracture/dislocations.

Methods:
This prospective, randomized study evaluated patients presenting to the emergency room over two-year period (2005-07). Forty-two patients with an ankle fracture-dislocation were randomized and given either conscious sedation or an intra-articular lidocaine block for the reduction. This was followed by application of a plaster splint. The patients used a visual analog pain scale to rate the level of pain before, during, and after the procedure.

Results:
Demographic data and fracture patterns between the groups were similar. Both the sedation and the block controlled pain to a similar degree. The pain reduction (the initial pain level minus the level of pain after medication was given or injected) was an average of 4.6 ± 3.3 for the block group and 4.2 ± 3.5 for the sedation group (p = 0.64). The average change in the level of pain between the initial presentation and during the reduction was 3.6 ± 3.8 for the block group and 4.1 ± 3.3 for the sedation group. Overall, both methods provided sufficient analgesia, with no significant difference between the two (p = 0.71). An acceptable reduction was achieved for forty-one of the forty-two patients with one patient in the sedation group unable to undergo closed reduction. The average time for ankle reduction and stabilization in a splint was 81.5 minutes for the sedation group and 63.8 minutes for the block group.

Conclusions:
Both intra-articular block and conscious sedation provide adequate analgesia when attempting to close reduce an ankle fracture/dislocation in the ER setting. This can be helpful when trying to minimize added risk in patients with multiple co-morbid conditions.