

Thiopental-Fentanyl versus Midazolam-Fentanyl for Emergency Department Procedural Sedation and Analgesia in Patients with Shoulder Dislocation and Distal Radial Fracture-Dislocation: A Randomized Double-Blind Controlled Trial

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Abstract : Background and aim: It has not been well studied whether fentanyl-thiopental (FT) is effective and safe for PSA in orthopedic procedures in Emergency Department (ED). The aim of this trial was to evaluate the effectiveness of intravenous FT versus fentanyl-midazolam (FM) in patients who suffered from shoulder dislocation or distal radial fracture-dislocation. Methods: In this randomized double-blinded study, seventy-six eligible patients were entered the study and randomly received intravenous FT or FM. The success rate, onset of action and recovery time, pain score, physicians' satisfaction and adverse events were assessed and recorded by treating emergency physicians. The statistical analysis was intention to treat. Results: The success rate after administering loading dose in FT group was significantly higher than FM group (71.7% vs. 48.9%, $p=0.04$); however, the ultimate unsuccess rate after 3 doses of drugs in the FT group was higher than the FM group (3 to 1) but it did not reach to significant level ($p=0.61$). Despite near equal onset of action time in two study group ($P=0.464$), the recovery period in patients receiving FT was markedly shorter than FM group ($P<0.001$). The occurrence of adverse effects was low in both groups ($p=0.31$). Conclusion: PSA using FT is effective and appears to be safe for orthopedic procedures in the ED. Therefore, regarding the prompt onset of action, short recovery period of thiopental, it seems that this combination can be considered more for performing PSA in orthopedic procedures in ED.

Keywords : procedural sedation and analgesia, thiopental, fentanyl, midazolam, orthopedic procedure, emergency department, pain

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