

Comparison of different ketofol procedural sedation and analgesic doses during orthopedic procedures in patients referred to the emergency department



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Background:

Orthopedic procedures are one of the most common medical procedures in the Emergency Department (ED) and are also among the most painful procedures performed on the conscious patient. This study aimed to compare different doses of ketofol in procedural sedation and analgesia in patients referred to the EDs.

Methods:

In this double-blinded clinical trial, 296 patients aged 18 years or over presented with the need for orthopedic procedures in the three academic EDs in 2020 were studied. After completing the written consent, the patients were randomly assigned to four treatment groups. Demographic information, underlying diseases, patients' physical condition, type of orthopedic injuries requiring intervention, and patients' vital signs were recorded in a checklist for each patient.

Results:

In this study, the mean age, gender, level of education, addiction, patients' physical condition, type of procedures performed, apnea, hypoventilation, bradycardia, hypotension, and agitation in all four treatment groups were not statistically different, but hallucination and hypoxia in group C (1: 3) were much less than other groups; thus, oxygen administration was more common in other groups.

Conclusion:

By testing different doses of ketamine, we concluded that doses of 1 mg and 0.5 mg were associated with more side effects. A dose of 0.33 mg of ketamine has fewer side effects while causing analgesia and sedation as in the above doses. A dose of 0.25 mg of ketamine increases the likelihood of requiring subsequent doses. Therefore, it seems that 0.33 mg of ketamine is the best dose of choice.

Keywords:

Orthopedic procedures, Ketofol, Procedural Sedation and Analgesia, Pain intensity