

Comparison of Effectiveness and Side Effects of Diazepam versus Midazolam Administration for Conscious Sedation in Patients Who Underwent Cataract Surgery

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Background: The purpose of this study was to compare the effectiveness and side effects of diazepam and midazolam administration for conscious sedation in subjects who undergoing cataract surgery.

Methods: A total of 79 patients undergoing cataract surgery under topical anesthesia with conscious sedation were prospectively reviewed. Our subjects were randomly divided to two groups. The first group comprised of 38 cases receiving 0.05 mg/kg diazepam slow intravenously (diazepam group) and the second group comprised of 41 cases receiving 0.01 mg/kg midazolam intravenously (midazolam group). Intraoperative variables such as systolic and diastolic arterial pressure, heart rate, respiratory rate and blood oxygen saturation were recorded immediately before sedation, 5, 10 and 15 minutes after diazepam or midazolam administration. All patients were contacted 24 hours after the operation for any early postoperative complications.

Results: The variability of systolic and diastolic blood pressure at 5, 10 and 15 minutes after sedation were statistically significantly higher in midazolam group compared to diazepam group. Six patients developed episodes of apnea during operation, two patients in diazepam and four patients in midazolam group. The surgeons' satisfaction was more in diazepam group but not statistically significant. Need for additional dose of benzodiazepine was more in the midazolam group. Drowsiness and functional impairment during 24 hours after surgery were not significantly different between the two groups.

Conclusion: Diazepam produces better perioperative hemodynamic profile, level of sedation and surgeon's satisfaction and less occurrence of apnea compared to midazolam group in patients who underwent cataract surgery.

Keywords: Diazepam; Midazolam; Cataract surgery; Conscious sedation; Topical anesthesia