

Intravenous hypertonic saline to reduce intraocular pressure: the effect of splitting the bolus

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PURPOSE: To compare intraocular pressure (IOP) and pain after a single versus split bolus of intravenous hypertonic saline (IVHTS) .

METHODS: In a prospective, randomized, interventional trial, we enrolled patients with an IOP of 22-34 mmHg. Twenty patients in Group 1 received IVHTS as a single bolus of 1 mmol/kg 23.4% sodium chloride, and 13 patients in Group 2 received two boli of 0.5 mmol/kg separated by 10 min. They graded pain at the infusion site. We measured IOP, heart rate and blood pressure before and 10 and 20 min after IVHTS.

RESULTS: Eighteen patients (90%) in Group 1 felt pain (median, 6.5; range, 0-10) . In Group 2, 11 patients (85%) felt pain after the first bolus (median, 6.0; range, 0-8) and 12 (92%) after the second one (median, 8; range, 0-10) . We found no difference in pain grade between the groups after their first bolus ($p = 0.33$) or between the first bolus of Group 1 and the second bolus of Group 2 ($p = 0.47$) . The median IOP reduction in Group 1 was 6.5 mmHg (range, 2-16) at 10 min and 7.0 mmHg (range, 4-16) at 20 min (p CONCLUSION: Splitting the bolus did not reduce pain associated with IVHTS. Single bolus is consequently recommended.

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