

Oxytocin administration during caesarian delivery: comparison between bolus versus infusion

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Introduction: Oxytocin is routinely administered during caesarean delivery for uterine contraction. Adverse effects are known to occur after intravenous oxytocin administration, notably tachycardia, hypotension, electrocardiographic (ECG) changes which is deleterious in high risk patients.

Aims & objectives: To compare the hemodynamic changes and uterine effect of same dose of oxytocin as intravenous bolus versus infusion .

Study design : Randomised single blind uncontrolled trial.

Study area : Burdwan Medical College and Hospital, Burdwan.

Study period: Jan, 2011 to June 2011

Materials and methods: 80 pregnant women undergoing elective caesarean delivery under spinal anaesthesia were randomly allocated to receive 3IU of oxytocin either as a bolus intravenous injection (bolus group) over 15 seconds or as infusion (infusion group) over 5 minutes. Uterine tone was assessed by an obstetrician as adequate or inadequate. Intra-operatively heart rate ,non-invasive blood pressure (NIBP),ECG changes were recorded. These data were compared between the groups. Any other adverse effects like chest pain, nausea, vomiting, flushing were noted.

Result : There was significant hemodynamic changes in terms of mean heart rate and mean arterial pressure in bolus group compared to infusion group. 4 patients in bolus group had ECG changes in the form of ST-T depression and 3 patients complained of chest pain. No such complications were found in infusion group.

Conclusion : We conclude that 3IU infusion of oxytocin has same uterine effect as 3IU bolus i.v. dose, with significantly less hemodynamic changes.

Keywords : caesarean delivery, hemodynamic change, oxytocin, uterine tone

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