

Original Paper

Pharmaceutical effects of ephedrine, atropine and mucosal phenilephrin on hemodynamic alterations of women during spinal anesthesia in cesarean section

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Abstract

Background and Objective: Hemodynamic alteration and hypotension due to spinal anesthesia can reduce tissue perfusion and increase ischemic risk, myocardial infraction, renal failures spinal damages and even deep veins thrombosis. This study was designed to compare pharmaceutical effects of ephedrine, atropine and mucosal phenilephrin on hemodynamic alteration of women during spinal anesthesia in cesarean section.

Materials and Methods: This randomized clinical and double blind study was done on 90 singleton pregnant women with ASA I and II class .the subjects gone elective cesarean section and allocated into three groups. subjects were received 500 ml ringer lactate before spinal anesthesia. Subjects in group I, II and III first received 0.1 mg/kg atropine (IV) 0.01mg/kg ephedrine and 100μgr phenilephrin (mucosal) prior spinal anesthesia, respectively. Hemodaynamic indexes including blood pressure, heart Rate, oxygen saturation and drug side effects were determined every 5 minutes interval through the surgery. Data was analyzed by using SPSS-11.5, Chi-Square and ANOVA tests.

Results: Hemodaynamic indexes were changed during study, but three medicine showed similar effect on heart Rate, blood pressure and changes of oxygen saturation ($P<0.05$). There was a significant differences among three groups for dosage of extra ephedrine to control of blood pressure ($P<0.05$). This increase dosage of extra ephedrine was 56.7%,20% and in ephedrine, phenilephrin and atropine groups,respectively. Nosia rate was 6.7%, 50% and 46.7% in phenilephrin, atropine and ephedrine groups, respectively ($P<0.05$).

Conclusion: This study showed that to prevent of blood pressure drop following spinal anastasia atropine, phenilephrin and ephedrine can be prescribed, but ephedrine is recommended for lowering the rate of nosia.

Keywords: Spinal anesthesia, Cesarean section, Prophylaxia, Atropine, Ephedrine, Phenilephrine

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