

COMPARISON OF THE EFFECTS OF PETHIDINE AND ONDANSETRON IN PREVENTION OF SHIVERING AFTER SPINAL ANESTHESIA FOR CESAREAN SECTION: A DOUBLE-BLIND CLINICAL TRIAL

Ghanei, M.; Damshenas, M. H.; Radmehr, M.

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Abstract

Introduction: Shivering is one of the most common problems after anesthesia and spinal anesthesia that causes serious complications including increased oxygen consumption, increased blood pressure, intracranial pressure, intraocular pressure and postoperative pain. It is essential to prevent shivering complications in the elderly and patients with cardiovascular disease. The present study aimed to determine and compare the effects of pethidine, ondansetron and placebo in prevention of shivering after spinal anesthesia in candidate patients undergoing cesarean section.

Methods: This was a double blind clinical trial on 132 female candidates undergoing spinal anesthesia in Jahrom hospitals in 2013. Selected patients were randomly divided into three groups of ondansetron (O), pethidine (P) and placebo (N). All patients underwent spinal anesthesia. All patients were hydrated with 500cc normal saline 45 minutes before spinal anesthesia. Immediately after spinal anesthesia, 4 mg ondansetron was administered intravenously to Group I, 25 mg pethidine was administered intravenously to Group II, 2cc normal saline as placebo was administered intravenously to Group III. The incidence of shivering was recorded 5 minutes prior to anesthesia and 5, 10, 15 and 30 minutes after anesthesia. The collected data was analyzed using SPSS 21, ANOVA and chi-square.

Results: there was no significant difference between the three groups in terms of age and mean duration of the surgery (p value > 0.05). Mean incidence of no shivering in Group I (ondansetron) was reported as 99% within five minutes before the surgery and 100% within ten minutes after the surgery. Mean incidence of no shivering in Group II (pethidine) was reported as 99% within five minutes before the surgery and 99% within 10 minutes after the surgery. Mean incidence of no shivering in Group III (normal saline) was reported as 100% within five minutes before the surgery and 96% within ten minutes after the surgery. Ondansetron and pethidine groups had a significant difference with control group in incidence of shivering (p value < 0.05). No significant difference was found between ondansetron and pethidine groups in incidence of shivering (p value > 0.05).

Conclusion: The results showed that in group pethidine 5 and 15 minutes after the action was more shivering but there was no significant difference in incidence of postoperative shivering

in ondansetron group and pethidine groups. Therefore, ondansetron is as much effective as pethidine in preventing postoperative shivering.

Key words: PETHIDINE, ONDANSETRON, PREVENTION ,SHIVERING, SPINAL, ANESTHESIA