

# **Prophylactic administration of intravenous Paracetamol for control of shivering during and post cesarean section with spinal anesthesia**

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## **Summary:**

### **Introduction**

Shivering refers to a series of repetitive involuntary movements of the skeletal muscles commonly occurred during spinal anesthesia. Regional anesthesia (both spinal and Epidural) reduces vasoconstriction and shivering threshold to 6 degrees Celsius above the surface of the block. The aim of this study was to determine the effect of prophylactic administration of Apotel IV in controlling shivering during and after cesarean section under spinal anesthesia.

### **Materials and Methods:**

In a double-blind randomized clinical trial in the Department of Anesthesiology of Tabriz on patients undergoing cesarean section with spinal anesthesia, the effect of prophylactic administration of Apotel IV in controlling shivering during and after cesarean section under spinal anesthesia was evaluated.

### **Results**

The mean age of patients was  $27.96 \pm 6.09$  years in Apotel group and  $29.6 \pm 68.49$  years in control group ( $p=0.175$ ). The mean ASA score of patients was  $1.16 \pm 0.37$  in Apotel patients and  $1.24 \pm 0.43$  in the control group ( $p=0.322$ ). The mean gestational age of patients was  $37.94 \pm 1.07$  weeks in Apotel group and  $37.58 \pm 2.07$  weeks in the control group ( $p=0.278$ ). The mean shivering scores of patients in Apotel group were  $0.72 \pm 0.80$  in the operating room and  $1.32 \pm 1.05$  in recovery room ( $P < 0.001$ ).

The mean shivering scores of patients in control group were  $1.16\pm 1.07$  in the operating room and  $2.28\pm 1.45$  in recovery room ( $P<0.001$ ). The mean increase of shivering score in patients was  $0.60\pm 0.98$  in Apotel group and  $1.12\pm 1.46$  in the control group.

The mean increase of shivering score in patients in Apotel group was significantly less than the control group ( $p=0.041$ ).

### **Conclusion**

In the present study, intravenous acetaminophen was used to reduce the shivering in patients after spinal anesthesia for CS.

The prophylactic use of intravenous acetaminophen reduced the rate of increase of shivering in patients after spinal anesthesia; so that the mean increase of shivering score was  $0.60\pm 0.98$  in Apotel group and  $1.12\pm 1.46$  in the control group. The mean increase of shivering score in patients in Apotel group was significantly less than the control group. Postoperative complications in patients in Apotel group was less than the control group, however, this difference was not statistically significant.

### **Keywords**

Shivering, Apotel, spinal anesthesia