

## **Comparison of intravenous Acetaminophen and Morphine sulfate for abdominal pain management in patients with acute abdomen**

### **Abstract**

**Background and Objective:** Pain management is a crucial component in the postoperative care of patient. Opioids, which have been the mainstay of postoperative pain control for some time, are being used less because of significant adverse effects. Recently Intravenous acetaminophen that is a analgesic and antipyretic drug is used for reduce postoperative pain. Our Objective in this study was to use intravenous acetaminophen as an analgesic and antipyretic drug with the least complications and more safe than intravenous opioids for comparison with the effects of intravenous morphine sulfate in patients with acute abdominal surgery referred to emergency department of Fatemi Hospital.

**Methods:** 120 patients with acute abdomen will be assigned into the study by randomized allocation. Demographic data, pain severity in admission to the emergency department and 30 minutes after injection, vital signs in admission, side effects, and clinical findings will recorded questionnaires. The pain level, tenderness and the rebound tenderness of the patients will determined by the Visual Analog scale. The subjects will be divided into two groups A and B randomly. The intravenous acetaminophen (15 mg/kg/100cc normal saline in the form of intravenous infusion for 30 minutes) will be administered for group (A) and intravenous morphine sulfate (0.1 mg/kg Slow-acting intravenous injection for 1.5 to 2 minutes) will be administered for group (B). After 30, 60 and 90 minutes, the patient's pain is re-examined. Changes in the patient's pain, tenderness, rebound tenderness and side effects will documented in two groups and they will compared. Finally, the collected data will be analyzed

**Results:** The mean age of patients in acetaminophen group was  $58.24 \pm 8.06$  years with a mean age of 27- 26 years and in morphine group was  $56.7 \pm 7.63$  years with age range of 34-69 years. There was no significant relationship between age and effect of intravenous acetaminophen and venous morphine sulfate. ( $P = 0.16$ ). The mean of pain before injection of intravenous acetaminophen group was  $8.92 \pm 1.25$  and the mean pain before injection of morphine group was  $8.80 \pm 1.35$ . There was no significant difference between the mean pain before injection of patients in the intravenous staphylococci group and the morphine group ( $P = 0.049$ ). The mean pain after injection of intravenous acetaminophen group was  $4.46 \pm 1.25$  and the mean pain after

injection of the morphine group was  $2.56 \pm 1.71$ . The mean pain after injection was significantly higher in patients with intravenous acetaminophen than in the morphine group. ( $P < 0.001$ )

**Conclusion:** Due to the effectiveness of intravenous acetaminophen in relieving the pain of patients, it is recommended that doctors and associates use this painkiller to relieve pain in patients.

**Keywords:** Intravenous acetaminophen, abdominal pain, morphine sulfate