

Category : **Cardiovascular: Other**

A176 - Efficacy and safety of postoperative use of morphine, fentanyl and remifentanyl after coronary artery bypass grafting

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Introduction:

Pain after cardiac surgery is significant and may affect postoperative cardiovascular stability and may develop into chronic pain thereafter (1). This postoperative pain should be carefully managed. The aim of this study was to compare the analgesic effects and safety of morphine, fentanyl and remifentanyl in patients after coronary artery bypass grafting (CABG) surgery.

Methods:

Study was prospective, randomised and double-blinded.

Participants: Forty-five patients undergoing coronary artery bypass surgery were included in the study.

Interventions: All patients received a standardised anaesthesia. They were randomised into 3 groups consisting of 15 patients each. M group received morphine HCl (1 mg/mL) with an infusion rate of 0.3 mg/h and 1-mg bolus doses; F group received fentanyl (50 µg/mL) with an infusion rate of 1 µg/kg/h and 10-µg bolus; and R group received remifentanyl (50 µg/mL) with an infusion rate of 0.05 µg/kg/min and 0.5-µg/kg bolus, respectively. Continuous infusion was started immediately after transfer to ICU.

Results:

Pain was assessed by using a numerical scale (0-10) and sedation was assessed with the Ramsey sedation score (1-6) 30 minutes, 1, 2, 4, 12, and 24 h after extubation. The number of boluses and demands, time to extubation and side effects were analysed. Numerical scale for pain scores, sedation scores and mean extubation times were similar in all groups. Total number of boluses and demands were statistically higher in the R group. Nausea and vomiting occurred more often in group M group ($p < 0.05$), whereas pruritus was most frequently registered in group F ($p < 0.05$).

Conclusion:

Despite the different durations of action of these three opioid agents, the infusion dose of remifentanyl was as effective as morphine and fentanyl after CABG surgery, with fewer side effects.

References:

1. de Hoogd S, et al. Remifentanyl versus fentanyl during cardiac surgery on the incidence of chronic thoracic pain (REFLECT): study protocol for a randomized controlled trial *Trials* 2014, 15:466