

## Post Operative Analgesia after Orthotopic Liver Transplantation; A Clinical Randomized Trial

**Authors :** Soudeh Tabashi, Mohammadreza Moshari, Parisa Sezari

**Abstract :** Introduction: Postoperative analgesia in Orthotopic Liver Transplantation (OLT) surgery is challenging for anesthesiologists. Although OLT is one of the most extensive abdominal operations, it seems that patients don't suffer from severe post operative pain. On the other hands drug metabolism is unpredictable due to unknown graft function. The aim of this study was to compare intraoperative infusion of remifentanyl versus fentanyl in postoperative opioid demand in patients with OLT and evaluating the complications in two groups. Method: In this double-blind clinical trial 34 patients who had OLT were included. They divided randomly in two groups of Remifentanyl (R) and Fentanyl (F). Patients in group R and F received infusion of Remifentanyl 0.3-1  $\mu\text{g}/\text{Kg}/\text{min}$  and Fentanyl 0.3-1  $\mu\text{g}/\text{Kg}/\text{min}$  during maintenance of anesthesia. Post operative pain were measured in 6, 12, 18, 24 hours and second and third days after surgery with Numeric Rate Scale (NRS). Patients had received intravenous acetaminophen as rescue therapy with NRS of 3 or more. In addition to demographic information, post operative opioid consumption were recorded as the primary outcome. Intraoperative blood transfusion, intraoperative inotropic drugs consumption, weaning time and intensive care unit stay were also evaluated. Results: Total dose of acetaminophen consumption in first 3 days after surgery did not have significant difference between two groups (Pvalue=0.716). intraoperative inotrope consumption, blood transfusion and post operative weaning time and ICU stay were also similar in both groups. Conclusion: This study demonstrates that intraoperative infusion of remifentanyl in OLT have the same effect on post operative pain management as fentanyl. Despite the complications of operation were not increased by remifentanyl.

**Keywords :** liver transplantation, postoperative pain, remifentanyl, fentanyl

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