

Comparative Study Between Local And Intravenous Dexamethasone On Postoperative Pain After Elective Lumbar Spine Surgery: A Randomized Controlled Study

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Purpose:

Spinal surgeries are generally associated with severe back pain in the postoperative period. Adequate pain management in this period has been associated with improved functional outcome, early ambulation, early discharge, and preventing the development of chronic pain .

we intended to compare between Local and intravenous dexamethasone on postoperative pain after elective lumbar spine surgery. This study design was a prospective randomized controlled double blinded clinical study.

Patients and Methods:

180 patients with American society of anesthesiologists physical status classes I and II, aged 18-45 years, admitted at Fayoum University hospitals from May 2016 to February 2018. Scheduled elective lumbar spine surgery under general anesthesia were randomly divided into three study groups each group contains 60 patients: (Group I): received 16 mg dexamethasone IV drip. (Group L): received 16 mg dexamethasone subcutaneous injection around the wound after skin closure. (Group P): received 500 ml saline infusion. Patients were observed for postoperative pain for 48 hours by using visual analog scale, duration of analgesia and any side effects. Statistical Analysis Used: one-way ANOVA test and Chi-square test.

Results:

There was a highly significant difference between placebo and local infiltration groups and between placebo and intravenous groups regarding the need for postoperative fentanyl. Comparing both interventional groups revealed statistically significant difference between local infiltration and intravenous group postoperative fentanyl consumption.

Conclusion:

Dexamethasone local infiltration was more effective than intravenous administration in postoperative pain management after elective spine surgery.