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Efficacy and safety of percutaneous nephrolithotomy (PCNL): Comparing general anesthesia with regional anesthesia. A randomized controlled study

B. Lojanapiwat, T. Tangpaitoon, C. Nisoog

Division of Urology, Department of Surgery, Chiangmai University, Chiangmai, Thailand

Objective: To compare the efficacy and safety of regional epidural anesthesia to general anesthesia in the patients who underwent PCNL.

Patients and Methods: Fifty patients who underwent percutaneous nephrolithotomy (PCNL) were randomized into two groups: Group I (N = 26) were received general anesthesia and Group II (N = 24) received regional epidural anesthesia. Demographic and operative data of age, BMI, stone position, stone size, postoperative pain, amount of postoperative analgesic usage, length of hospital stay, patient satisfaction, preoperative and postoperative hemoglobin and hematocrit, adverse effects and surgical complication were compared between both groups.

Results: Average pain score at 1 hr. was 6.88 in group I and 3.12 in group II ($p < 0.001$), at 4 hr. was 5.07 in group I and 3.42 in group II ($p = 0.025$). Less morphine requirement in regional epidural anesthesia group compared to general anesthesia group. Higher Satisfaction was found in regional – epidural group. Six (23.07%) patients of Group I and 1 patient (4.19%) of Group II had postoperative nausea and vomiting, respectively ($p < 0.05$). Pain score at 12 hr, 24hr, 48hr, 72 hr, preoperative and postoperative hemoglobin and hematocrit, length of hospital stay, and adverse effects were not different between two groups.

Conclusion: Regional epidural anesthesia is an alternative technique for PCNL which achieves more patient's satisfaction, less early postoperative pain and less adverse from medications with same efficacy compare to general anesthesia.

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