

Comparison of local and regional Anesthesia for
Dialysis Arteriovenous Fistula creation Surgery

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6th Edition of World Congress & Exhibition on VASCULAR SURGERY

Abstract

Objectives:

Local, regional and general anesthesia can be used for dialysis arteriovenous fistula creation surgery. For patients with end stage renal disease and comorbidities local and regional anesthesia are preferable the general one, but influence of anesthesia type on perioperative pain related to dialysis arteriovenous fistula operations and outcome of surgery are not yet clearly understood.

Materials and methods:

This was a prospective, randomized study, in which 103 patients with end stage renal disease who underwent dialysis arteriovenous fistula (AVF) operations on upper limb had been included. They were randomly divided in two groups: 54 patients in whom regional anesthesia was done (Group I) and 49 patients operated under local anesthesia (Group II). For regional anesthesia the method of nerve stimulation guided vertical infraclavicular block selected. Influence of anesthesia type on perioperative pain had been evaluated and compared between the groups.

Results and discussion:

No anesthesia related complications had been detected. The mean time to motor and sensory anesthesia after vertical infraclavicular block was 14.2 ± 2.3 min. Insufficiency of sensory anesthesia had been detected

in 3 cases (5.5%). Less number of patients with regional anesthesia required additional intraoperative analgesia as compared to the local anesthesia group ($p=0.0374$). Time to postoperative pain initiation was higher in Group I then in Group II - 2.3 h vs 1.7h, ($p=0.0477$). The need in postoperative pain killers was significantly less in regional as compared to local anesthesia group ($p=0.0323$). Duration of operation was significantly less in regional anesthesia as compared with local one - 67.5 min vs 134.7 min ($p=0.0007$) and in some cases surgical tactic had been changed due to vasodilation after regional anesthesia.

Conclusion:

Regional anesthesia provides significantly better perioperative analgesia as compared to local anesthesia for dialysis AVF operations. It decreases the operation time, need of additional pain killers and should be selected as a method of choice for some forms of dialysis AVF operations.

Biography

Vakhtang Shoshiashvili is an Anesthesiologist, department of anesthesiology and intensive care, TSMU first university clinic, Anesthesiologist, department of anesthesiology and intensive care, Research Institute of Clinical Medicine Associate professor, faculty of medicine, European University, Expert in anesthesiology and intensive care, Department of inter clinical relations, TSMU.

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