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Background

Axillary brachial plexus block is the most widely used regional anesthesia technique for surgical procedures involving the hand and forearm. It is easy to perform and has few complications. The analgesic regimens used in humans were inefficient or of too short duration to prevent peripheral and central neurological changes. Our objective is to study the incidence of complication after (continuous brachial plexus block) with optimal perioperative analgesia (OPA) in patient undergoing hand surgery, in terms of postoperative pain control, intensity and duration of the local inflammatory response, impact of pain on function and quality of life.

Materials and Methods

The requirements of my (our) institution(s) Human Investigations Committee have been met. 60 patients were participated in this study. Patients were treated from the day of surgery with COX2 inhibitor. Patients were received per-operative analgesia through a brachial plexus block with bupivacaine, a catheter was introduced at the axillary level until it reaches the brachial plexus and tunnelized under the skin for a distance for 10 cm and fixed and kept for 72 hours. Validated questionnaires and procedures have been used to assess level of pain acute and chronic after surgery, postoperative local inflammatory response, hand function, impact of pain on quality of life, and activities of daily living. Data were collected before and after surgery by a trained nurse. Patients were randomized to be perfusing for 3 days with either bupivacaine 0.25% 3ml/hours or 3 ml/ hours saline. COX 2 inhibitors and oxycontin were used as rescue medication

Results and Discussions

Five patients out of 60 that participated in the study have problem with infusion pump setup. Three patients suffer from localizing neuropathic pain for 6 weeks postoperatively. All patients tolerate the procedure. Pain score were measured as well as all rescue medication taken for treatment. Hand function and activities of daily living after surgery are better compared to before surgery.

Conclusion(s)

We conclude that continuous brachial plexus block with optimal perioperative analgesia is a safe and feasible procedure with excellent results compared to traditional procedure.