

ZNAČAJ PERIOPERATIVNE PRIMENE LIDOKAINA U TERAPIJI BOLA U LAPAROSKOPSKOJ KOLOREKTALNOJ HIRURGIJI

SIGNIFICANCE OF PERIOPERATIVE USE OF LIDOCAINE IN PAIN THERAPY IN LAPAROSCOPIC COLO RECTAL SURGERY

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SAŽETAK

Cilj istraživanja: studije: Istražiti značaj analgeznog efekta kontinuirane intraoperativne infuzije lidokaina u cilju smanjenja količine ili doze opioidnih i ne-opioidnih analgetika u perioperativnom periodu kod pacijenata koji su podvrgnuti kolorektalnoj operaciji.

Materijali i metode: U ovoj studiji učestvovalo je trideset pacijenata koji su podvrgnuti kolorektalnoj hirurgiji pod opštom anestezijom. 15 pacijenata je primilo lidokain (grupa lidokaina - LG) u dozi od 1,5 mg/kg intravenski bolus u trajanju od 10 minuta, nakon čega je usledila infuzija od 1,5 mg/kg/h IV, 30 minuta pre insuflacije gasa, koja je prekinuta 60 minuta nakon završetka hirurškog zahvata. Druga grupa (kontrolna grupa - GA) je postoperativno primala analgeziju u kombinaciji tramadolom i ketorolakom. Za obe grupe korišćen je propofol u dozi od 2-2,5 mg/kg za indukciju anestezije, fentanyl 1,5 µg/kg IV za održavanje anestezije i sevofluran 1-2 vol/%, odnos kiseonika i vazduha 1:1. Za intubaciju i održavanje relaksacije korišćen je rocuronium u dozi od 0,1-1 mg/kg. Postoperativna ocena bola vršena je korišćenjem vizuelne analogne skale (VAS) od 0 do 10, svaka 2 sata do prvog postoperativnog dana, a zatim svaka 4 sata tokom narednih 72 sata. Ako je intenzitet bola bio ≥ 4 , započeta je analgezija. Praćena je količina primenjenih analgetika, a metabolički odgovor (leukociti, CRP i glukoza) merili su se 3 sata nakon završetka operacije i naredna tri dana.

Rezultati i diskusija: Na prvom merenju, pacijenti iz LG grupe su prema VAS skali imali ocenu bola između 3 i 6 i primili su svoj prvi ketorolak. Od 15 pacijenata, kod 6 je dodat i tramadol (statistički značajno, $p < 0,05$). U GA grupi, intenzitet bola prema VAS skali bio je između 5 i 9, a lečen je tramadolom. Primena tramadola je značajno smanjena u LG grupi (40%), a u kasnijem periodu tokom kretanja, korišćenje tramadola je značajno smanjeno u LG grupi ($50 \text{ mg} \pm 25 \text{ vs. } 200 \pm 50$). Vrednosti leukocita, CRP i nivoa glukoze u krvi bile su nešto niže u LG grupi, ali razlika nije bila statistički značajna.

Zaključak: Perioperativna kontinuirana intravenska primena lidokaina smanjuje sistemsku upotrebu analgetika u lečenju postoperativnog bola tokom kolorektalne laparoskopske hirurgije. Iz tog razloga, ova stara metoda dobija novi pristup.

Ključne reči: iv primena lidokaina, laparoskopska hirurgija

ABSTRACT

Background and Goal of Study: To examine the significance of the analgesic effect of continuous intraoperative infusion of lidocaine in order to reduce the amount or dose of opioid and non-opioid analgesics in the perioperative period in patients undergoing colo-rectal laparoscopic surgery.

Materials and Methods: Thirty patients undergoing colorectal surgery in OET anesthesia, participated in this study. 15 patients received lidocaine (lidocaine group LG) with 1, 5 mg/kg intravenous bolus in 10 min followed by a 1, 5 mg/kg/h IV infusion, 30 min before before gas insufflation and stopped 60 min after after the surgery is over. Second (control group GA), were administered postoperatively for analgesia in combination tramadol and ketorolac. For both groups propofol 2-2.5 mg/kg will be used to induce anesthesia, and fentanyl 1.5 µg/kg IV will be used to maintain anesthesia and sevoflurane 1-2 vol/%, oxygen:air ratio 1:1. For intubation and maintenance of relaxation we will use rocuronium of 0.1-1mg/kg. Postoperative pain score were evaluated by using visual analog scale score of 0 to 10, every 2 h until the first postoperative day and then every 4 h next 72 h. If pain intensity ≥ 4 , analgesia was started. Monitored the amount of administered analgetic and metabolic response (leukocytes, CRP and glucose) were measured 3 h after end of operation and next three days.

Results and Discussion: At the first measurement patients from LG, by the VAS scale incited a pain score between 3 and 6 and received their first ketorolac. From 15 patients in 6 was added and tramadol (statistically significant, $p < 0,05$). In GA group, the intensity of pain by the VAS scale was between 5 and 9, and docked by tramadol. Application of tramadol was significantly reduced in the LG (40%), And in the later period during movement use of tramadol was significantly reduced in the LG ($50 \text{ mg} \pm 25 \text{ vs. } 200 \pm 50$). The value of Le, CRP and blood glucose levels were some lower in the LG, but the difference was not statistically significant.

Conclusion(s): Perioperative continuously intravenous lidocaine reduces the systemic use of analgetics in the treatment postoperative pain during colo rectal laparoscopic surgery. For this reason, this old method has a new approach.

References: 1.Marret E et al. Meta-analysis of intravenous lidocaine and postoperative recovery after abdominal surgery. Br J Surg. 2008;95:1331-8

Keywords: iv application of lidocaine,, laparoscopic surgery