EFFECT OF PARECOXIB ON POSTOPERATIVE HYPERALGESIA INDUCED BY REMIFENTANIL-BASED ANESTHESIA

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Objective: To investigate the effect of parecoxib on postoperative hyperalgesia induced by remifentanil-based anesthesia.

Methods: One hundreds ASAIorII patients, aged 21-64yr, weighing 50~80 kg, undergoing elective laparoscopic operation, were randomly divided into 5 groups (n=20 each): parecoxib group(group P), small-dose remifentanil group (group S), large-dose remifentanil group (group L), small-dose remifentanil + parecoxib group (group SP) and large-dose remifentanil + parecoxib group (group LP). Parecoxib 40 mg was injected intravenously at 30 min before anesthesia in Group P, SP and LP. Anesthesia was induced with midazolam 0.05 mg/kg, etomidate 0.2 mg/kg, cisatracurium 0.15 mg/kg and remifentanil 1 μg/kg (fentanyl 4μg/kg in group P). The patients was tracheal intubated and mechanically ventilated. PETCO2 was maintained at 35-45 mm Hg. Anesthesia was maintained with infusion of remifentanil at 0.05μg·kg-1·min-1(in group S and SP) or at 0.3μg·kg-1·min-1 (in group L and LP) combined with inhalation of sevoflurane and infusion of cisatracurium at 0.12mg·kg-1·h-1 . At 30 min after operation, numeric rating scale (NRS) was used to assess the degree of pain at rest and during activity. Tramadol 1.5 mg/kg was injected intravenously after opration if needed. NRS scores were maintained ≤5. The use of tramadol and adverse effects during 24h after operation were recorded.

Results: Compared with group P, NRS scores at rest and during activity were significantly increased at 30 min after operation in group S and L, the incidence of shivering and the number of patients who needed tramadol were significantly increased in group L, and no change was found in NRS scores at rest and during activity at 30 min after surgery, the incidence of adverse effects and the number of patients who needed tramadol in group SP and LP. Compared with group S, NRS scores at rest and during activity at 30 min after operation, the incidence of shivering and the number of patients who needed tramadol were significantly increased in group L, NRS scores at rest and during activity at 30 min after surgery were significantly decreased and no change was found in the incidence of adverse effects and the number of patients who needed tramadol in group SP. Compared with group L, NRS scores at rest and during activity at 30 min after operation, the incidence of shvering and the number of patients who needed tramadol were significantly decreased in group LP.

Conclusion: Intravenous injection of parecoxb 40 mg at 30 min before anesthesia can attenuate postoperative hyperalgesia induced by remifentanil-based anesthesia.