

Poor control of postoperative pain can lead to complications that delay discharge from hospital. Mild or severe pain after surgery can have negative effects on the pulmonary and cardiovascular system. It can also prevent early mobilization, lead to reduced bladder and intestinal motility. Effective postoperative analgesia is associated with lower rates of morbidity, mortality and also results in shorter hospitalization, which reduces overall costs (Ersayli et al., 2006). Pain signals from damaged tissues are not transmitted to the central nervous system (CNS) through a hard-wired pathway. In contrast, nociceptive signals, once initiated, will launch a cascade of alterations in the somatosensory system, including an increase in the responsiveness of both peripheral and central neurons that is known as sensitization of pain pathways. These alterations will increase the response to subsequent stimuli and thus amplifying the pain (Woolf et al., 2000). Preemptive analgesia is defined as an antinociceptive treatment that is initiated before the surgical procedure in order to reduce the physiological consequences of nociceptive transmission provoked by the surgical procedure. Owing to this protective effect, Preemptive analgesia has the potential to be more effective than a similar analgesic treatment initiated after surgery (Dahl and Moiniche, 2004). Also, by decreasing the central sensitization, provoked by the surgical stimuli, preemptive analgesia is thought to consequently decrease the incidence of hyperalgesia and allodynia after surgery (Wilder, 2000). The concept of Preemptive analgesia to reduce the postoperative pain was found on a series of successful animal experimental studies that demonstrated the CNS plasticity, and sensitization after nociception (Cliff et al., 2005). Different strategies have been used to study the preemptive analgesia. These strategies have been involved at one or more sites along the pain pathway (Soltani et al., 2007). Knee arthroscopy is one of the most common orthopedic procedures done. Various types of anesthesia, including local, peripheral and neuroaxial blockade, and general anesthesia, have been successfully used for arthroscopic techniques. However, the ideal anesthetic based on patient satisfaction, surgical operative conditions, operating room efficiency, side effects and time to postoperative recovery and discharge remains controversial. In addition, differences in results may be due to differences in surgical and patient expectations, as well as variations in postoperative nursing management (Horlocker and Hebl, 2003). Good postoperative analgesia after knee arthroscopic surgeries allows early mobilization and therefore favors a faster functional recovery (Kehlet, 1994). Some investigations have suggested that the preemptive intraarticular injection (IAI) of opioids may reduce postoperative analgesic requirements and hypersensitivity after ambulatory arthroscopic knee surgery (Reuben et al., 2001). As well as the intraarticular (IA) administration of medications, either local anesthetics opioids, or a combination of the two will improve immediate postoperative pain control (Kha et al., 2005). In this study we evaluated the efficacy of preemptive intraarticular injection of bupivacaine, morphine, clonidine and magnesium sulphate in the management of postoperative pain in patients undergoing elective ambulatory arthroscopic knee surgery.