Analgesia for total knee arthroplasty using continuous femoral nerve block: comparison between two rates of drug infusion using 0.125% levobupivacaine.

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BACKGROUND

Total knee arthroplasty (TKA) is associated to severe postoperative pain. For its control, continuous femoral nerve block (CFNB) analgesia has proven as a successful technique, but the prope infusion rate is controversial.

Our goal is to evaluate effiiciency and safety ot two infusion rates of 0,125% levobupivacaine through a CFNB after TKA

MATERIAL AND METHODS

Comparative and retrospective study of 382 patients scheduled to TKA. with postoperative analgesia using CFNB between 2014 and 2015. Patients are divided in two groups, depending on the infusion rate with 0,125% levobupivacaine: 7 ml/h or 12ml/h . For both groups, complementary analgesia was conducted with paracetamol and dexketoprofen and first rescue analgesics was tramadol. Demographic characteristics, VAS (mm) scores at rest and in motion after 24h, dispensed boluses and complications were recorded

RESULTS

382 patients were included, 245 in the 7 ml/h infusion rate group and 137 in the 12mlh one. No demographic differences were found among bothgroups. The group of 12 ml/h registered slightly lower VAS medium levels than the 7 ml/h group after 24h, being statistically not significant ($p < 0,05$) (table 1). Patients that received an infusion rate of 7 ml/h need a higher amount of boluses than those of 12 ml/h group (5 or more boluses: 45,1% in 7ml/h group vs. 39% in the 12ml/h group). All the complications recorded are shown in table 2. The best choice of local anesthetic, including concentration and optimal volume, is controversial. Infusion rates under 4.6ml/h for CFNB have been provn to be inefficient, but the use of higher rates has not yet been sufficiently studied.

VAS 24h	At rest (mm)	In motion (mm)
Group 7ml/h	26,2 (SD 21,8)	32,2 (SD 29,9)
Group 12ml/h	24,8 (SD 19,6)	32,1 (SD 22,2)

TABLE 1

COMPLICATIONS	Group 7ml/h	Group 12ml/h
Nausea/vomits ($p < 005$)	14,6%	5,1%
Motor block	0,8%	0,7%
Paresthesia	4%	4,3%
Catheter released	9,7%	8%

TABLE 2

CONCLUSIONS

Using of high infusion rates (12 ml/h) of 0,125% levobup. Through a CFNB delivers a similar analgesia in comparison to moderate rates (7 ml/h) without increasing complications. However, a high infusion rate seems to decrease. The necessity of rescue analgesia and thus the resulting complications due to opioids consumption.