TITLE : Nonstimulating vs stimulating catheters in continuous femoral block

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INTRODUCTION: There are many types of catheters available for continuous femoral nerve block; stimulating vs nonstimulating. Does the type of catheter have an effect on the quality of post-operative analgesia following hip and knee replacement surgery?

METHODS: Following ethic committee approval, 60 patients were randomly distributed into 4 groups, 8 hip and 7 knee replacement surgery per group. Peroperatively, group A, B and D had femoral catheter and nerve block. Group A had a contiplex non stimulating catheter, group B a stimulong catheter, group D an Arrow stimulating catheter. Group C had no femoral block and no catheter. For patient with femoral catheter, continuous infusion of 6 ml/h of Ropivacaine .2% for 48 hours. All the patients had a PCA device.

RESULTS: Pain control at rest was good in the postoperative period, without difference among the groups. However, pain control during movement was less impressive but better in groups with femoral catheter, especially the stimulating ones with significant difference at day 1 and day 3 (figure). In fact, satisfaction at day 1 for pain control during movement was greatest in the group B ($6 \pm 2,5$) and D ($5,9 \pm 2$) VS group C ($3,6 \pm 3,1$) ($p < 0,05$ for both); satisfaction at days 3 with group B ($6,2 \pm 3,1$) and A ($5,6 \pm 2$) VS group C ($3,7 \pm 2,2$) ($p < 0,05$ for both). Morphine consumption was larger in group C than in the others ($p < 0.05$ B vs C). Obturator nerve block was infrequent. Sciatic nerve block was always absent.

DISCUSSION: The group with PCA only were less satisfied than the 3 groups with femoral catheters with their analgesia during movement. The 2 groups with stimulating catheters presented a trend for better results, especially group B with the stimulong® catheter. Stimulating catheters have already been reported to present better blocs in experimental conditions (1). The present clinical study tends to confirm these results. Obturator (2) and Sciatic innervation is important for analgesia after knee and hip surgery. This could explain why the patient weren't more relieved from their pain with the femoral catheter during movement.

REFERENCES: 1) Reg Anesth Pain Med. 29: 212-219 2)Anesth Analg. 99:251-4

Fig 2 : Patient satisfaction of pain control at movement