

# Post-operative analgesia with lumbar continuous block in femur fractured patients over seventy years old. A randomized study.

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**Background.** Femur fractures are an important public health problem in elderly population. Only 30-40 % of the patients recuperate pre-fracture mobility. Pain management is a central point during rehabilitation. The continuous lumbar block analgesia (CLBA) showed good pain control and less adverse events than epidural or endovenous analgesia (EVA). At the moment, there are not randomized studies that evaluate early mobilization in the elderly.

**Objectives.** To compare early mobilization and pain control between patients with CLBA and patients with EVA.

**Methods.** Patients with femoral fracture older than seventy years and no cognitive diseases were randomized in two groups (CLBA with ropivacaine 0.2% 12 ml/h vs. EVA with tramadol 300mg/24hs). Those patients unable to walk without assistance before the fracture were excluded. Rest and incident pain were documented at 24, 48 and 72 hours. Pain was assessed with The Numerical Rating Scale (NRS). Adverse events (AE) such as nausea and vomiting and constipation were documented.

**Results.** 20 patients were included in the study (Table 1). There were not pain control differences at rest at 24, 48 or 72 hours. After mobilization there was a significant statistic difference at 48 and 72 hours (median NRS 5 IQR 4 with CLBA vs. median NRS 2 IRQ 3,  $p=0.04$ ). 90 % of the patients with CLBA walked at 72 hours vs. 45 % in the EVA group ( $p=0.012$ ). (Graphic 1). In the EVA group, 70% had at least one AE, compared with the 30% in the CLBA group ( $p=0.07$ ).

**Conclusions.** Our results suggest that CLBA could be an effective and safe technique in elder patients with femur fracture. CLBA allows early mobilization and reduction of incident pain with few adverse events. The impact in hospital length of stay, delayed mobility and mortality must be clarified in further studies.

**Table 1. Epidemiological data.**

			EVA (n=10)	CLBA (n=10)	<i>p</i>
Age (years old)	median (sd)		85.3 (5.3)	85.7 (5.5)	0.89
Sex -Female	n (%)		8 (80)	9 (90)	0.88
Weight kg	median (sd)		69.9 (12)	61.6 (12.4)	0.15
Height cm	median (sd)		164.9 (10.3)	161.6 (5.5)	0.44
ASA	I	n (%)	0	0	1.00
	II	n (%)	2 (20)	2 (20)	1.00
	III	n (%)	5 (50)	6 (60)	0.88
	IV	n (%)	3 (30)	2 (20)	0.78
	V	n (%)	0	0	1.00

**Graphic 1: Mobilization at 24, 48 and 72 hours.**

