

IMPROVEMENT IN POSTOPERATIVE PAIN CONTROL BY THE INTRODUCTION OF ELASTOMERIC LOCAL ANAESTHESIC LEVOBUPIVACAINE PUMPS IN PATIENTS UNDERGOING ARTHROPLASTY

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5PSQ-036

BACKGROUND AND IMPORTANCE

In order to improve pain control in patients undergoing arthroplasty, in March 2021 the Pain Management Unit introduced a new protocol that included the use of elastomeric levobupivacaine pumps administered in the adductor canal.

AIM AND OBJECTIVES

To evaluate the reduction of post-operative pain and the need for rescue analgesia after the introduction of elastomeric levobupivacaine pumps.

MATERIALS AND METHODES

Retrospective and quasi-experimental study carried out in a 254-bed regional hospital.

All patients who underwent knee replacement surgery were included. Two study groups were established: PRE group (August 2020 to February 2021) and POST group (March to September 2021).

Data were obtained from the paper nursing register and the patient's electronic medical records.

Statistical analysis was carried out with SPSS v19 and χ^2 or Student's t test were applied according to the type of variable. A p value < 0.05 was considered statistically significant.

VARIABLES COLLECTED

Demographic data
Anesthetic risk according to ASA (American Society of Anesthesiologist)
VAS (Visual Analogue Scale) pain score at rest on the intervention day (day 0)
VAS on day 1 at rest
VAS on day on movement
VAS on day 2 (discharge day) at rest
VAS on day 2 on movement
Need for rescue medication

RESULTS

93 PATIENTS INCLUDED



36 (38.7%) men; age: 72 (7) years old.

Anesthetic risk: 1 (1.1%) patient with ASA I, 74 (80.4%) patients with ASA II and 17 (18.5%) patients with ASA III.

PRE group, 39 (41.9%) and POST group 54 (58.1%) patients.

No statistically significant differences were observed between groups.

	PRE GROUP	POST GROUP	P value
VAS day 0	3.7 (2.9)	1.9 (1.8)	P < 0.001
VAS day 1 (at rest)	3.3 (1.6)	2.3 (1.1)	P < 0.001
VAS day 1 (on movement)	6.4 (1.4)	3.8 (1.6)	P < 0.001
VAS day 2 (at rest)	2.7 (1.6)	2.0 (1.3)	P < 0.025
VAS day 2 (on movement)	5.2 (1.3)	3.7 (1.5)	P < 0.025

Use of rescue medication	PRE GROUP	POST GROUP	P value
Day 0	9 (23.1%)	9 (16.7%)	P > 0.05
Day 1	7 (17.9%)	6 (11.1%)	P > 0.05
Day 2	2 (5.13%)	3 (5.56%)	P > 0.05

CONCLUSIONS

- Better pain control can be appreciated with the introduction of levobupivacaine pumps. However no statistically significant differences in the use of rescue analgesic medication between groups have been observed.
- It is unknown whether the functional recovery of these patients would be affected, an interesting topic for future studies.