

**COMPARISON OF INTRATHECAL ISOBARIC
CHLOROPROCAINE 1% AND 0.5% BUPIVACAINE HEAVY IN
PATIENTS UNDERGOING DAY CARE SURGERIES –
A PROSPECTIVE RANDOMISED DOUBLE BLIND STUDY.**

By

DR. SAMANVITHA K



Dissertation Submitted to the

Rajiv Gandhi University of Health Sciences, Karnataka, Bengaluru

In partial fulfilment of the requirements for the degree of

DOCTOR OF MEDICINE

IN ANAESTHESIOLOGY

Under the guidance of

DR. S V TORGAL

PROFESSOR



**DEPARTMENT OF ANAESTHESIOLOGY
SDM COLLEGE OF MEDICAL SCIENCES AND HOSPITAL**

Manjushree Nagar, Sattur

Dharwad

2017-2020

ABSTRACT

Title: Comparison of intrathecal isobaric chloroprocaine 1% and 0.5% bupivacaine heavy in patients undergoing day care surgeries –a prospective randomised double blind study.

Background and objectives: The number of surgical procedures performed on ambulatory basis have increased worldwide. Spinal anaesthesia is a safe and reliable technique for infraumbilical surgeries. Nevertheless, some of its characteristics may limit its use for ambulatory surgery, including delayed ambulation, risk of urinary retention, and pain after block regression. The choice of the correct local anaesthetic for spinal anaesthesia is therefore crucial in the ambulatory setting. Although low doses of long-acting local anaesthetics such as bupivacaine, ropivacaine and levobupivacaine are usually administered intrathecally, they are associated with significant risk of delay in hospital discharge. Short-acting local anaesthetics may therefore represent a valid alternative in this setting. The recent re-introduction of intrathecal chloroprocaine (CP) may offer a good alternative in the ambulatory setting. Here we compared the post-operative two segment regression time in patients receiving intrathecal chloroprocaine isobaric or bupivacaine heavy undergoing day care surgeries. Secondary outcomes were comparing the haemodynamic response and post-operative voiding time caused by administration of intrathecal chloroprocaine and bupivacaine.

Methodology: A randomised double blind study was performed in sixty patients of ASA class I and II undergoing day care surgeries. These patients received either intrathecal isobaric 1% chloroprocaine 35 mg (Group A) or 0.5% bupivacaine heavy 7.5 mg (Group B). These patients were assessed for post-operative two segment regression time, hemodynamic parameters like heart rate, systolic blood pressure, diastolic blood pressure also post-operative urine voiding time and unassisted ambulation time.

Results: Demographic parameters were comparable in both the groups. Post-operative two segment regression time was significantly shorter in chloroprocaine group (45.27 ± 4.79 minutes) than bupivacaine group (109.97 ± 18.96 minutes). Post-operative urine voiding time was 156.0 ± 10.2 minutes in Group A and 251.6 ± 13.3 minutes in Group B which was statistically highly significant and the unassisted ambulation time in chloroprocaine group was 103.6 ± 13.3 minutes and that of bupivacaine group was 266.7 ± 15.2 minutes. However, the hemodynamic parameters showed statistically significant difference but clinically not significant.

Conclusion: We conclude that the post-operative two segment regression time, urine voiding time and ambulation time was significantly shorter in chloroprocaine group than bupivacaine group in patients undergoing day care surgeries.

Keywords: Chloroprocaine; Bupivacaine; Day care surgery; Two segment regression; Urine voiding time; Ambulation time