



Role of Dexamethasone in Post-Caesarean Analgesia and Recovery

Dr. Sakshi Bajaj, Dr Vatsla Dadhwal, Dr K Aparna Sharma, Dr Jyoti Meena, Dr Rajesh Kumari, Dr Deepali Garg, Dr Anubhuti Rana, Dr Neha Varun, Dr Soniya Dhiman, Dr Vimi Rewari



All India Institute of Medical Sciences, New Delhi, India, 110029

Introduction

Post-caesarean analgesia not only promotes early ambulation and better recovery but also facilitates bonding between the mother and her newborn allowing for early breastfeeding and a positive birth experience. These goals are achieved through **multimodal analgesia**.

Dexamethasone inhibits cyclooxygenase and lipoxygenase pathways owing to its immunosuppressive and anti-inflammatory effects. It may prolong the duration of analgesia, decrease the intensity of postoperative pain and incidence of rebound pain.

Through this study, we wanted to study the efficacy of dexamethasone as a part of multimodal analgesia in reducing postoperative pain and **reducing opioid requirement**.

Aim and Objective

Primary Objective:

To study the efficacy of a single dose of intraoperative dexamethasone in reducing postoperative pain during first 24 hours after caesarean section.

Secondary Objectives:

- To determine the additional analgesic requirement during the initial 24 hours post-surgery
- To assess the time from surgery to the initiation of breastfeeding
- To assess the time from surgery to ambulation
- To assess the Quality of recovery 48 hours after surgery

Materials and Methods

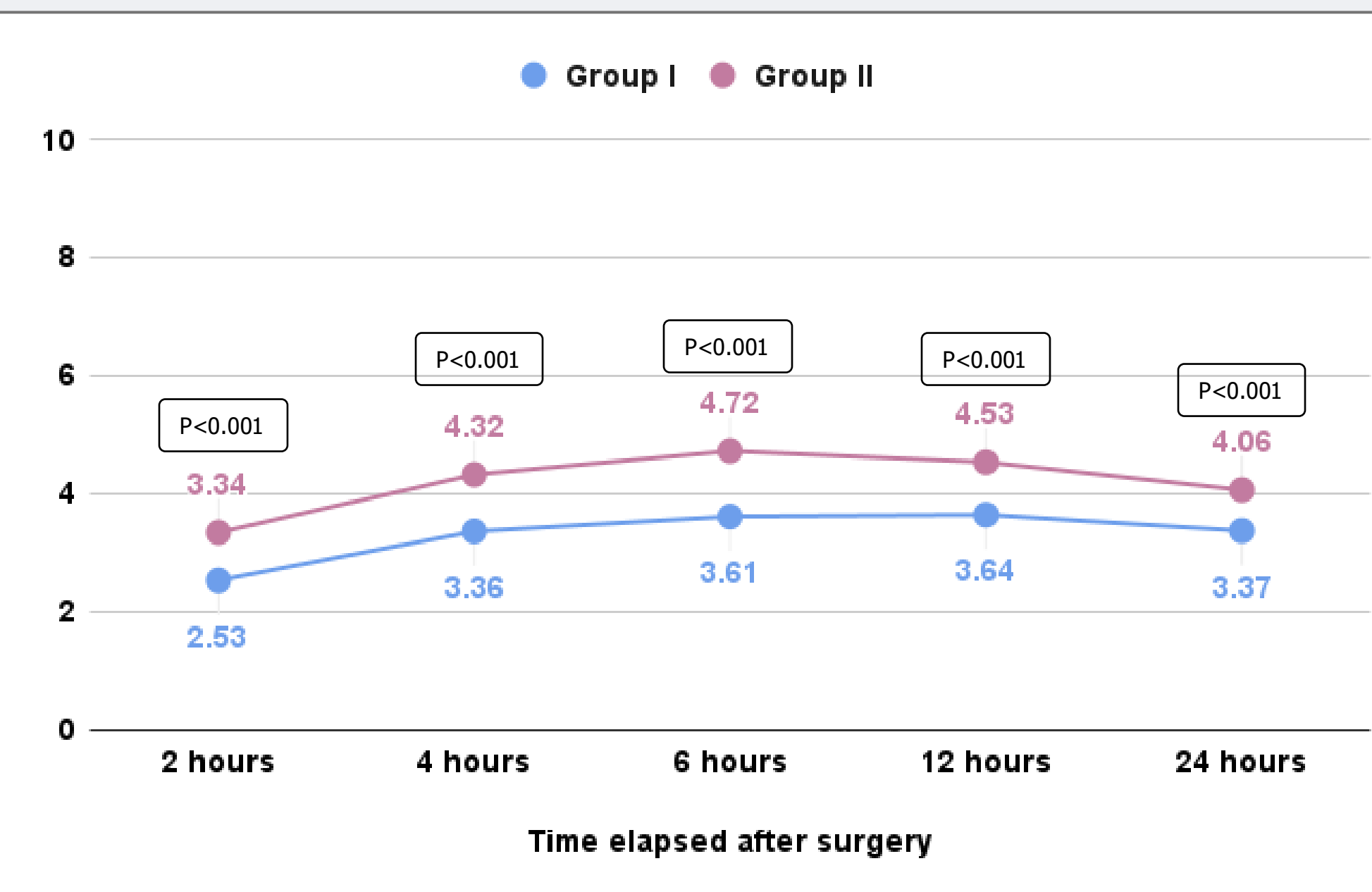
Design: Randomised double blinded placebo-controlled trial

Setting: Department of Obstetrics and gynaecology, All India Institute of Medical Sciences, New Delhi

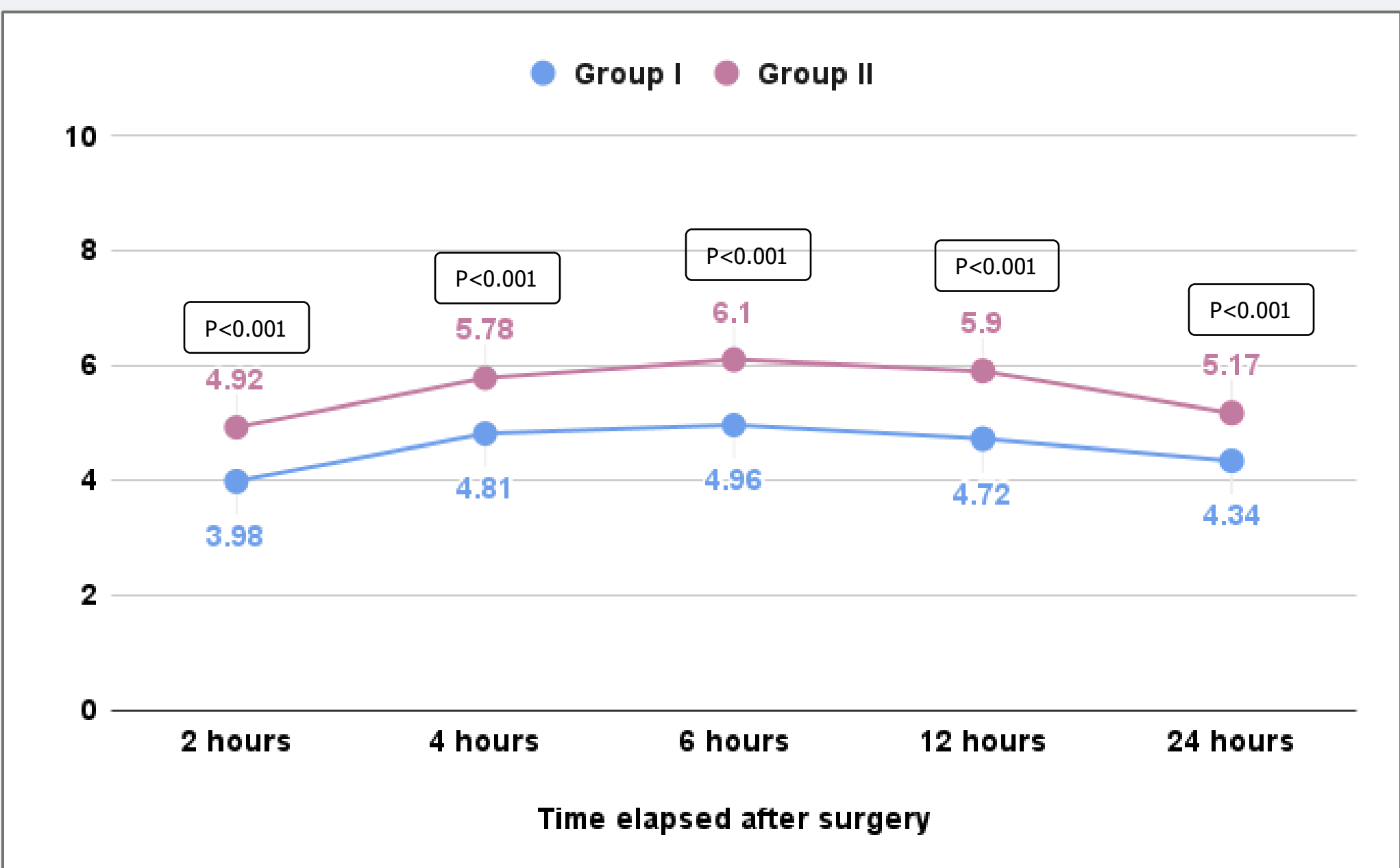
Sample Size: 150 participants undergoing caesarean section under spinal anaesthesia were randomised into two groups of 75 each

Intervention: Group I received 0.2 mg/kg dexamethasone whereas Group II received 10 ml normal saline intraoperatively. Women in both groups received Bupivacaine 20 ml (0.25%) subcutaneously before skin closure, and for first 24 hours post operatively Inj paracetamol 1 gm IV Q6H and Inj diclofenac 75 mg IV Q8H. Inj tramadol 50 mg IV was given as rescue analgesia

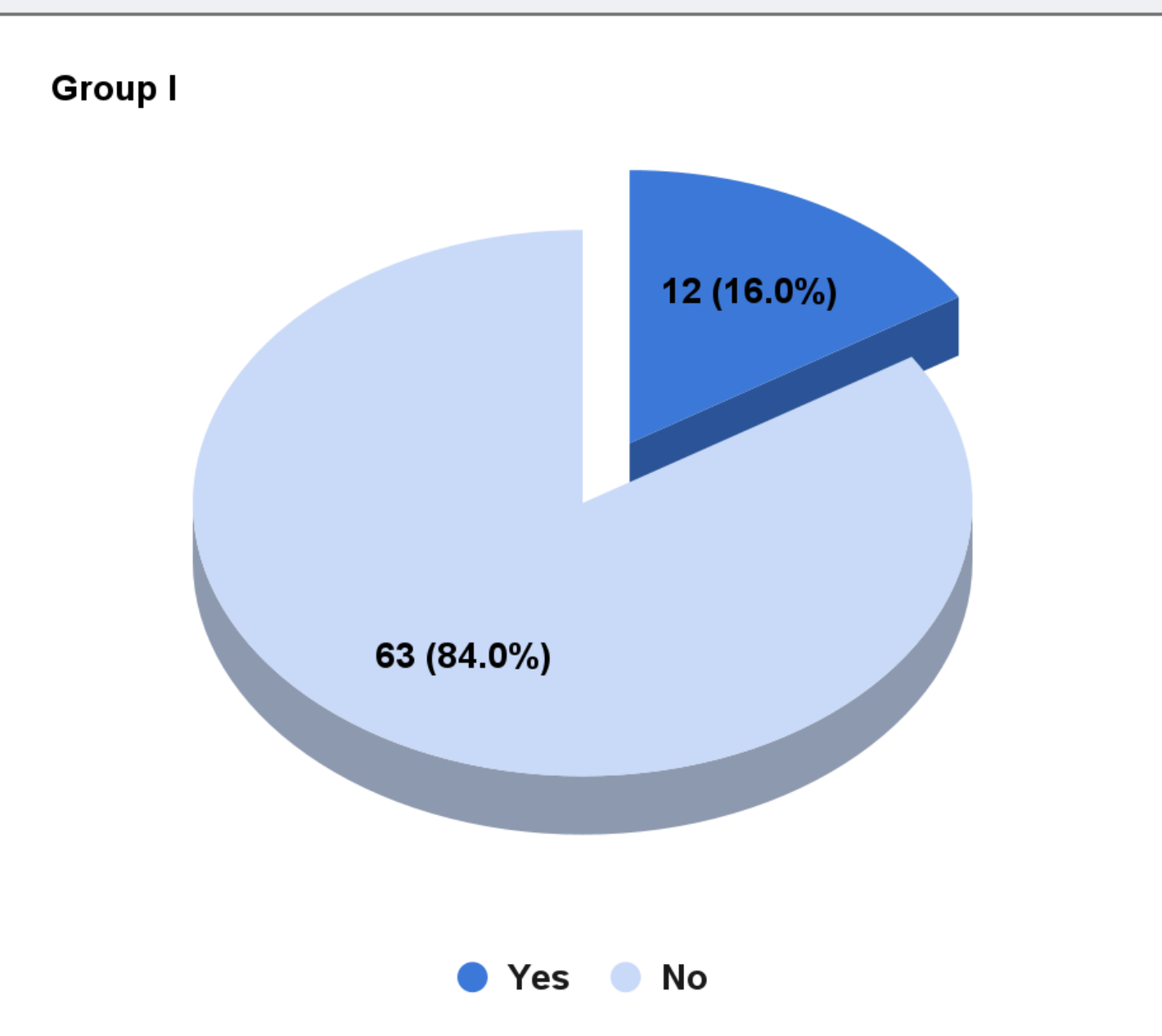
Results



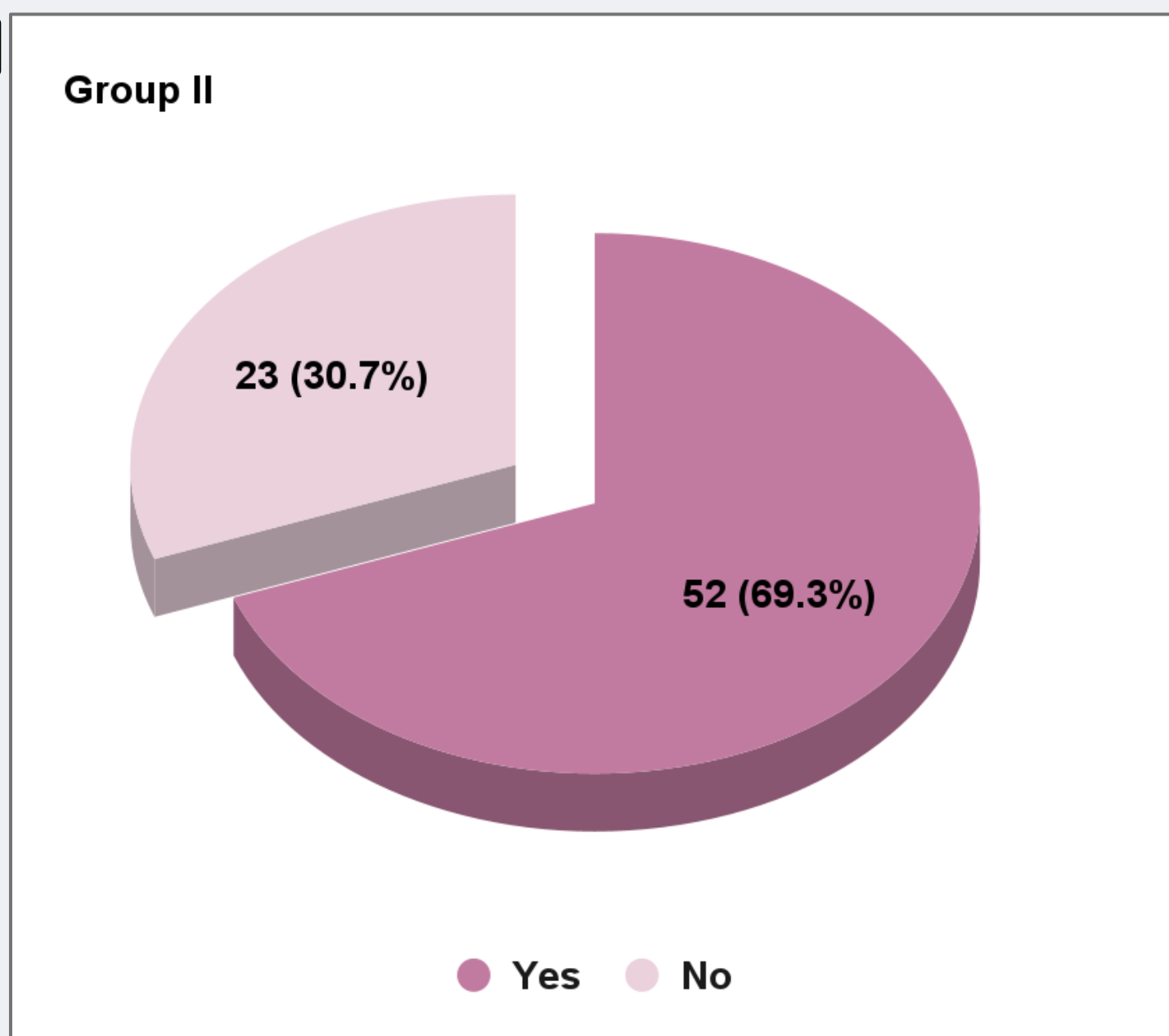
VAS scores at rest



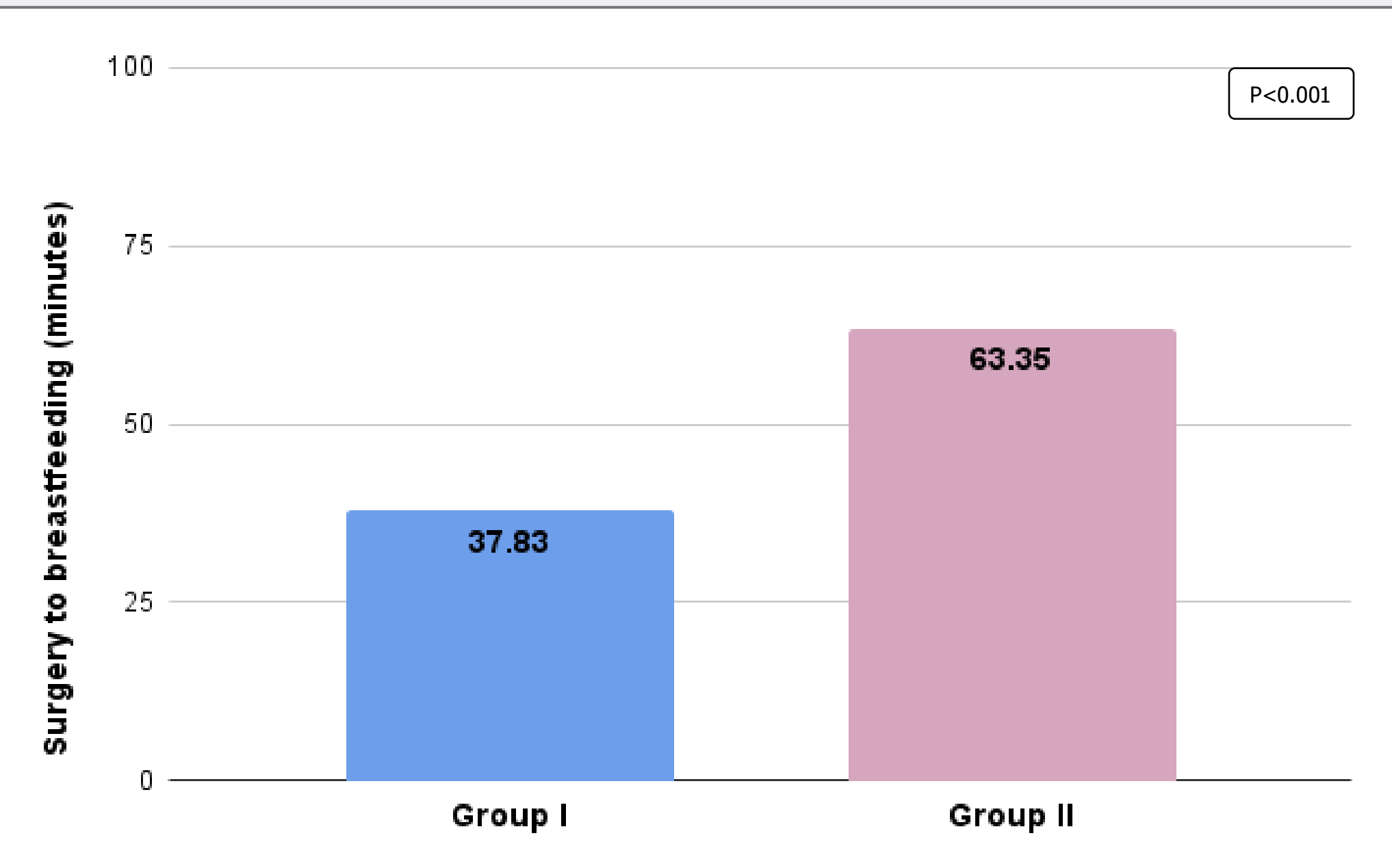
VAS scores with coughing



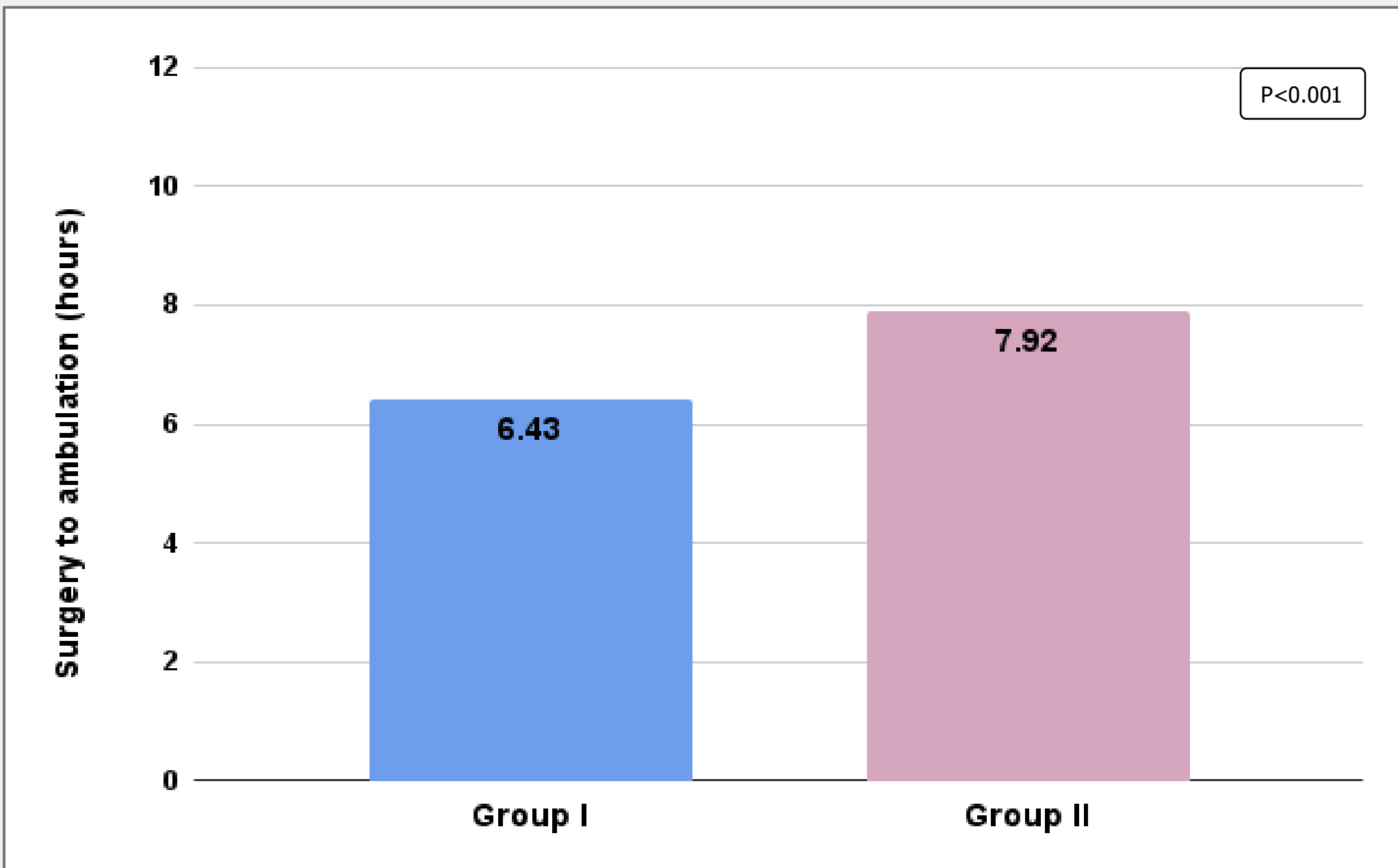
Need for rescue analgesia in group I



Need for rescue analgesia in group II



Time from surgery to breastfeeding



Time from surgery to ambulation

QOR 40 score			
QOR 40 Components and Total	Group I	Group II	P value
Emotional state	42.02+/-1.21	40.5+/-1.26	<0.001
Physical comfort	55.8+/-1.64	51.4+/-1.70	<0.001
Psychological support	32.6+/-1.35	31.8+/-1.35	<0.001
Physical independence	23.7+/-1.06	21.5+/-1.00	<0.001
Pain	32.2+/-1.23	29.2+/-1.45	<0.001
QOR 40 (Total)	186.44+/-4.41	174.60+/-4.01	<0.001

Discussion

PROSPECT (procedure-specific postoperative pain management) guideline for elective caesarean section by Roofthoof E et al. is a systematic review. Suggested dexamethasone administration intravenously (5–10 mg)

Memon et al. 2021 (n=60) and Mehdiratta et al. 2021 (n=49) also found significant decrease in VAS scores on addition of dexamethasone intraoperatively.

Adebisi et al. 2024 (n=188) also found similar decrease in need of rescue analgesia

Patnaik et al. 2020 (n=70) also noted improved QOR 40 score in dexamethasone group.

Conclusion

Single dose dexamethasone used as part of multimodal analgesia in caesarean section results in lower pain at rest and coughing, reduced need of rescue analgesia, shorter time from surgery to breastfeeding as well as ambulation and improved postoperative quality of recovery.