



ABDOMINAL CIRCUMFERENCE AS A PREDICTOR OF HYPOTENSION FOLLOWING SPINAL ANAESTHESIA FOR ELECTIVE CAESAREAN SECTION: A PROSPECTIVE OBSERVATIONAL STUDY

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ABSTRACT

Spinal anaesthesia is the preferred anaesthetic technique for elective caesarean section but is commonly associated with maternal hypotension. This prospective observational study evaluated whether abdominal circumference predicts spinal-induced hypotension in 60 term parturients. Although hypotension occurred frequently, abdominal circumference was not significantly associated with hypotension or ephedrine requirement. These findings suggest that abdominal circumference alone should not be used as an isolated predictor.

KEYWORDS : Spinal anaesthesia; Caesarean section; Hypotension; Abdominal circumference; Ephedrine

INTRODUCTION

Maternal hypotension after spinal anaesthesia remains a common challenge during caesarean delivery. Numerous patient-related factors have been investigated to improve prediction and prevention. Abdominal circumference has been proposed as an indirect marker of increased intra-abdominal pressure that may influence venous return and spread of intrathecal local anaesthetic. This manuscript summarizes the findings of a prospective observational study evaluating this relationship.

AIM

To determine whether abdominal circumference predicts hypotension following spinal anaesthesia for elective caesarean section.

MATERIALS AND METHODS

A prospective observational study was conducted in 60 ASA II term parturients undergoing elective caesarean section under spinal anaesthesia. Preoperative abdominal circumference was measured. Standard spinal anaesthesia with hyperbaric bupivacaine was administered. Blood pressure and heart rate were monitored, and hypotension was treated with intravenous ephedrine. Statistical analysis assessed correlations between abdominal circumference and hypotension.

RESULTS

The mean abdominal circumference was approximately 101 cm. Forty-five percent of patients required vasopressor treatment. No statistically significant association was observed between abdominal circumference and the incidence of hypotension or ephedrine requirement. Age showed a weak positive correlation with abdominal circumference.

DISCUSSION

The findings indicate that abdominal circumference alone is an inadequate predictor of spinal-induced hypotension. The results agree with studies suggesting that multiple physiological variables influence haemodynamic responses during spinal anaesthesia. Individual patient assessment remains essential.

CONCLUSION

Abdominal circumference should not be used as a standalone predictor of hypotension during elective caesarean section under spinal anaesthesia. Larger multicentre studies incorporating multiple predictive variables are recommended.

Conflict of interest: None declared.

Funding: No external funding.

Ethical approval: Institutional Ethics Committee approval was obtained and informed consent was secured from all participants.

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