



Effects of Preloading, Co Loading And Co Loading With Vasopressors in The Management of Hypotension in Parturients After Spinal Anaesthesia

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ABSTRACT

It is a well known fact that pregnant ladies tend to develop severe hypotension (less than 90mmHg systolic or more than 20% drop from baseline BP) after spinal anaesthesia for caesarean section surgeries, which is very deleterious both to the mother and fetus and must be treated with urgency. Keeping a wedge of 10 cms under the right buttock for left uterine tilt, to some extent only helps in reducing hypotension. In this study, we used crystalloids and vaso pressors to treat the severe hypotension that occurs in almost 60 -70 % pregnant cases. We tried preloading , coloadng with crystalloids (RL/NS) and coloadng with crystalloids and vasopressor ephedrine to find the efficacy of each in managing the severe hypotension for better maternal and fetal outcomes. We observed that co loading with crystalloids and use of vasopressor ephedrine is the best method in managing the hypotension.

KEYWORDS : CAESAREAN SECTION, HYPOTENSION, SPINAL ANAESTHESIA

AIMS AND OBJECTIVES: To determine the best method for managing hypotension induced by spinal anaesthesia in obstetric patients

INCLUSION CRITERIA : ASA 1 & ASA 2 Cases

EXCLUSION CRITERIA: ASA 3 &ASA 4 Cases

METHODOLOGY:

A randomized prospective study involving 99 patients, after getting medical ethics committee approval and informed consent from the patients , they were divided into three groups of 33 patients each.

Group 1 : 33 patients received crystalloids (RL/NS) 30 minutes before spinal anaesthesia(20ml/kg) (preloading)

Group 2: 33 patients received crystalloids (RL/NS) along with spinal anaesthesia.(20ml/kg)(co loading)

Group 3 :33 patients received 20 ml/kg of crystalloids as co loading and supplemented with vasopressor ephedrine in 6mg boluses.

Hypotension was taken as a systolic BP of less than 90 mm Hg or more than 20% fall from baseline BP and the outcome from each of these above groups were compared and the results derived.

OBSERVATION AND RESULTS:

Group 1 – severe hypotension (fall of BP <90 mm Hg systolic or >20% fall from baseline value) occurred in 10 cases, inspite of preloading with crystalloids (RL/NS) 30 minutes before starting spinal anaesthesia.

Group 2- severe hypotension (fall of BP <90 mm Hg systolic or >20% fall from baseline value) occurred in 5 cases, , inspite of co loading with crystalloids (RL/NS) at the start of spinal anaesthesia.

Group 3- All patients were managed successfully without much of hypotension.

DISCUSSION:

In pregnant patients in almost 60-70% of the cases develop severe hypotension (fall of BP <90 mm Hg systolic or >20% fall from baseline value) due to:

1. Supine hypotension caused by Aorto caval compression by gravid uterus .
2. Decreased venous return to the heart due to peripheral vascular

dilatation caused by spinal sympathetic block.

Though keeping a wedge of 10 cms below the right buttock helps in tilting the gravid uterus to left ,the compression of great vessels by the gravid uterus is not totally abolished. Of all different methods used to manage the serious hypotension induced by spinal anaesthesia crystalloids , colloids and vasopressors are commonly used. Different techniques like preloading with crystalloids and colloids, co loading with crystalloids and colloids and co loading with crystalloids and with vasopressors were tried.

CONCLUSION:

It is obvious that co loading with crystalloids (RL/NS) and use of vasopressor like ephedrine in 6mg boluses is a cheap ,risk free alternative than plain co loading with crystalloids. Preloading with crystalloids (RL/NS) 30 minutes before spinal anaesthesia does not help in alleviating the severe hypotension in obstetric patients.

REFERENCES: