



Evaluation of current practice of local anaesthetic dose in relation with height and weight for caesarean sections.

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Introduction:

- The severity of hypotension is directly related to the dose of hyperbaric bupivacaine used in the spinal.
- Adjusting the dose of local anaesthetic can provide adequate surgical anaesthesia while decreasing the incidence of hypotension and use of vasopressors¹.
- With an aim to reduce these complications, we evaluated our current practice whether doses were adjusted according to height and weight or not.

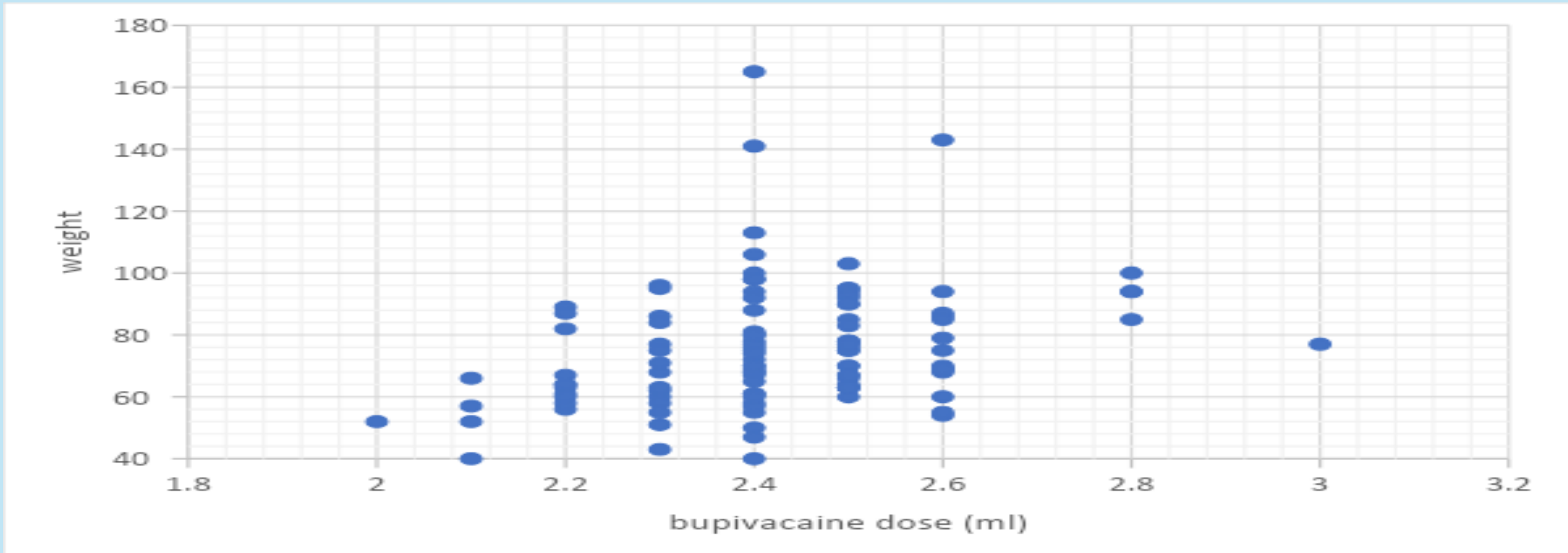
Methods:

- Trust Audit department approval taken.
- Data for one month for 118 patients' elective and emergency cases was collected.
- Height, weight, dose of heavy bupivacaine, incidence of hypotension, bradycardia, nausea and vomiting was noted.

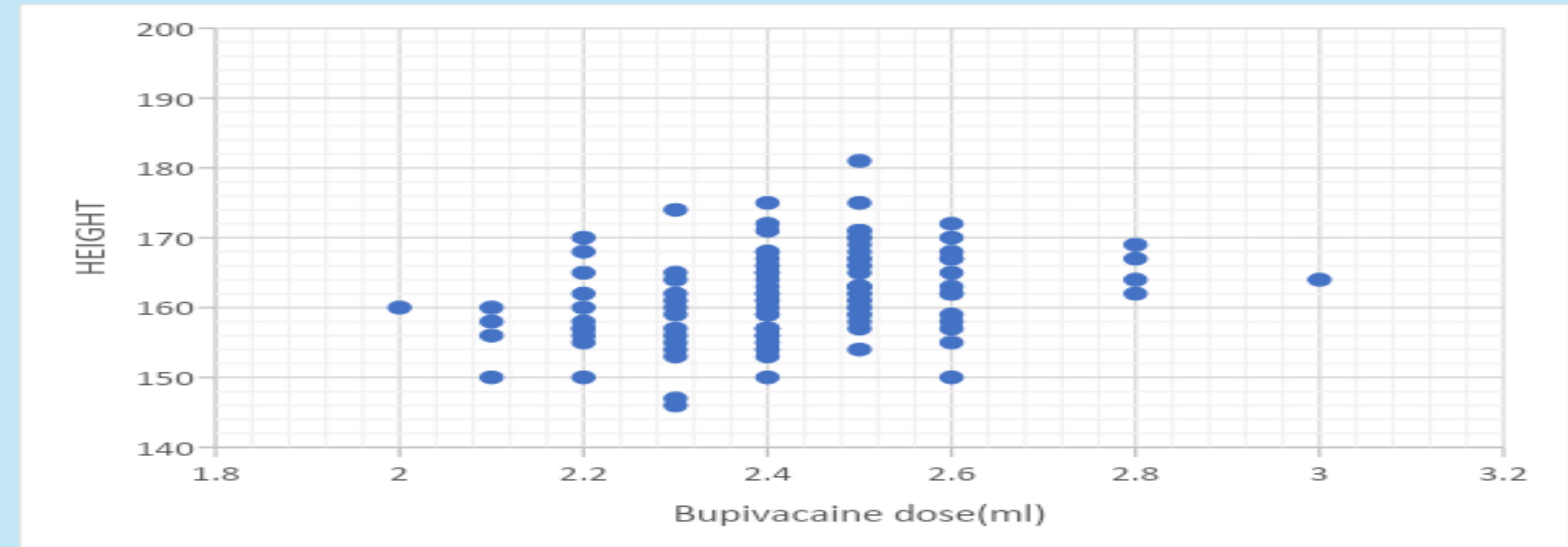
Results:

- Our results showed that with our current practice, NO dose adjustments were made for height or weight of patients. Our incidence of hypotension, nausea vomiting were very high, 94.6% and 79% respectively.

- Figure 1: Scatter diagrams showing a correlation between the dose of bupivacaine and height or weight.



Results:



Discussion:

- Height is related to vertebral column length which can clearly influence block height.
- Obesity increases compression of the inferior vena cava leads to engorgement of epidural venous plexus and reduces cerebrospinal fluid volume.
- The effect of body weight on the spread of local anaesthetic is debated in various studies.
- A pregestational BMI of more than 25 is identified as an independent risk factor for hypotension after spinal anaesthesia²
- We presented our results in our department clinical governance and highly recommended the use of height and weight-adjusted dosages of local anaesthetic in spinal for caesarean section.
- It will reduce the incidence of complications, better patient satisfaction and early discharge from recovery

References:

1. J. M. Harten, I. Boyne, P. Hannah. Effects of a height and weight adjusted dose of local anaesthetic for spinal naesthesia for elective Caesarean section. Anaesthesia 2005;60:348-53
2. Fernando Souza Nani , Marcelo Luis Abramides Torres Correlation between the Body Mass Index (BMI) of Pregnant Women and the Development of Hypotension in spinal Anaesthesia for Caesarean Section .Brazilian Journal of Anesthesiology 2011;Volume 61, Issue :121-30