

CORRELATION BETWEEN VERTEBRAL COLUMN LENGTH AND SPREAD OF ISOBARIC SUBARACHNOID ROPIVACAINE IN THE TERM PARTURIENT

BASHARAT AHAD¹, SABA MOOSARAZA², KHALID SOFT³ & AJAZ AHMED RATHER⁴

¹Associate Professor & I/C HOD Anesthesiology, Skims Medical College, Bemina Srinagar, Jammu and Kashmir, India

²PG Scholar, Department of Anesthesiology, Skims Soura, Srinagar, Jammu and Kashmir, India

³Assistant Professor, Department of Anesthesiology, Skims Soura, Srinagar, Jammu and Kashmir, India

⁴Associate Professor & I/C HOD, Surgery, Skims Medical College Srinagar, Skims Medical College Srinagar, India

ABSTRACT

The spread of spinal anaesthesia is unpredictable. There is a correlation between vertebral column length, abdominal girth, BMI and spread of spinal anaesthesia.

Methods: Age, weight, height, BMI, and vertebral column length (Straight and Curved) were recorded in 100 patients. 15 mg of 0.75% isobaric ropivacaine along with 15 microgram fentanyl was given in subarachnoid space via L3-4 interspace using 25 g pencil point spinal needle. The cephalad spread (loss of temperature sensation and loss of pinprick discrimination) was assessed at 5, 10, 15, 20 and 30 minutes after intrathecal injection. The data was analysed using statistical software SPSS 16.0. We measured Area Under Curve (AUC) to consider both dimensions of time and extent of cephalad spread and then studied relation of vertebral column length and AUC by Scatter plot. A coefficient of relation of 0.4 was considered to be significant.

Results: From all these correlations between vertebral column lengths and vertebral level of loss of pin prick and temperature sensation statistically significant >0.4 were observed in case of vertebral column length. Abdominal girth and BMI on other hand showed an insignificant relation with spread of anaesthesia.

Conclusion: Vertebral column length (both straight and curved) was a significant determinant of the level of spread of anaesthesia with a fixed dose of isobaric ropivacaine. The need to adjust the dose of drug according to vertebral column length is recommended to obtain an adequate level of block.

KEYWORDS: Spinal Anaesthesia, Isobaric Ropivacaine, Vertebral Column Length, Spread of Spinal Anaesthesia