

The predictive ability of non-invasive haemodynamic parameters for hypotension during caesarean section: a prospective observational study.

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Spinal anaesthesia for caesarean section induces hypotension, which may cause severe adverse effects. Our goal was to determine whether hypotension could be predicted by pulse oximetry parameters, such as the perfusion index and pleth variability index, heart rate, ratio of low-frequency to high-frequency components of heart rate variability, and entropy of heart rate variability, measured before the induction of anaesthesia. The predictive value of these parameters for detecting hypotension was assessed using logistic regression and the grey zone approach in 81 parturients. Logistic regression revealed heart rate to be the only independent predictor (OR 1.06; 95% CI 1.01-1.13; $p = 0.032$). The grey zone for heart rate was in the range of 71-89 bpm, and 60.5% of parturients were in the grey zone. Pre-anaesthetic heart rate, but not other parameters derived from pulse oximetry or heart rate variability, may be a prognostic factor for hypotension associated with spinal anaesthesia.