BISPECTRAL INDEX MONITORING AND TITRATION OF ANAESTHETICS DURING OFF-PUMP CORONARY ARTERY BYPASS SURGERY

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Background:
The objective of this clinical trial was to evaluate the role of Bispectral index monitoring in reducing anaesthetic requirements and/or the need for circulatory support. In patients undergoing off-pump coronary artery surgery.

Methods:
In a prospective randomized controlled study, 40 patients undergoing off-pump coronary artery revascularization (OPCAB) were randomly allocated into 2 groups. Group I (Control group) 20 patients managed without Bispectral index (BIS) monitoring, while in Group II (BIS group) 20 patients, where a BIS electrode was applied and a target reading within a range of 40-60 to be achieved through titration of anaesthetics. Measurements included the haemodynamics, total anaesthetic requirements, total dosage of phenylepherine intravenous pushes, and the need for inotropic support of Dopamine infusion, incidence of intraoperative awareness, as well as postoperative extubation time and length of ICU stay.

Results:
Anaesthetic requirements and the total dosage of phenylepherine were significantly lower in the BIS group than in the control group. Haemodynamic parameters were comparable in both groups with no statistical significance. No recorded event of intraoperative awareness in both groups. Postoperative data of extubation time and length of ICU stay were statistically insignificant between the two studied groups.

Conclusion: BIS monitoring during OPCAB reduces anaesthetic requirements and the total dosage of phenylepherine.