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 **Original article :**

**A Prospective Evaluation of Intraoperative Depth of Anesthesia on Postoperative Pain and Use of Analgesics at a Tertiary Care Hospital**

**Dharavath Babu Rao1, Tayade Himanshu Panditrao2**

1Assistant Professor, Department of Anesthesiology, Velammal Medical College Hospital and Research Institute, Madurai, Tamil Nadu, India.

2Associate Professor, Department of Pharmacology, Mamata Medical College, Khammam, Andhra Pradesh, India.

**Corresponding Author:** Dr. Tayade Himanshu Panditrao, Associate Professor, Department of Pharmacology, Mamata Medical College & General Hospital, Khammam, Andhra Pradesh, India.

**Abstract**

**Background:** Anaesthetic depth is the degree to which the central nervous system (CNS) is depressed by a general anaesthetic agent, depending on the potency of the anaesthetic agent and the concentration in which it is administered. The present study was conducted to evaluate the effect of intraoperative depth of anesthesia on postoperative pain and use of analgesics.

**Materials & Methods:** 50 female subjects were enrolled. Complete demographic and clinical details of all the patients were obtained. A preanesthetic checkup was done to assess the fitness for the proposed surgical procedure under general anesthesia. Patients were randomly assigned to either the BIS Titrated group (Group 2), where depth was adjusted to a BIS value of 45 to 40, with extra propofol infusion if necessary, or the conventional Practice group (Group 1), where depth was modified in accordance with conventional practice and BIS value was recorded. There were four levels of sedation: 0 for fully awake, 1 for occasionally drowsy but rousable, 2 for frequently sleeping but rousable, and 3 for both asleep and unrousable. At the end of the 24-hour period, the total amount of analgesics used, including tramadol and morphine, was noted. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software.

**Results:** Mean age of the patients of Group 1 and Group 2 was 40.2 years and 41.7 years. Mean duration of surgery among patients of Group 1 and Group 2 was 53.9 mins and 50.7 mins respectively. Mean BIS value among patients of Group 1 and Group 2 was 54.7 and 49.3 respectively; on comparing the results were found to be statistically significant. Mean time to eye opening was significantly higher among patients of Group 2 in comparison to Group 1. Also, overall rescue morphine requirement was significantly higher in group 1. Overall, VAS was significantly higher in group 1.

**Conclusion:** By maintaining BIS value of 45 to 40 during surgical procedure, postoperative pain and requirement of rescue analgesia could be decreased.