

LETTER TO THE EDITOR

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# Awareness about bispectral index monitoring

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To the Editor,

We read with great interest the article by Chhanwal et al. During surgical procedures, achieving adequate depth of anesthesia is of prime importance. Assessing and monitoring depth of anesthesia are gradually becoming an essential part of anesthesia practice. Chhanwal et al. have very well delineated the importance of bispectral index (BIS) in anesthesia practice (Chhanwal et al. 2022).

Lighter planes of anesthesia can make the patient aware of the surroundings. This recall of events can lead to post traumatic stress disorder. Planes of anesthesia deeper than required can sometimes lead to hemodynamic disturbances due to adverse cardiovascular effects of anesthetic agents. Monitoring of depth of anesthesia can decrease the incidence of awareness during anesthesia. Furthermore, the dose of anesthetic agents can be titrated in hemodynamically unstable patients and also speed early recovery from anesthesia.

Chhanwal et al. concluded in their study that BIS monitoring besides preventing intraoperative awareness helped in stabilizing hemodynamic parameters during induction of anesthesia with titrated aliquots of propofol as compared to the routine dosage regimen.

Forty-three percent of patients having intraoperative awareness with recall are known to develop posttraumatic stress disorder (Whitlock et al. 2015). Inadequate anesthetic dose is the commonest cause of awareness and

can be due to inadequate anesthetic agent given, higher individual requirements, or anesthesia delivery system malfunction. BIS monitoring has added advantage in cases of total intravenous anesthesia where the benefit of monitoring minimum alveolar concentration (MAC) is not there. BIS monitoring has been shown to reduce recovery times and shorten the stay in post anesthesia care unit (Punjasawadwong et al. 2014).

In our study to assess the correlation between BIS and minimum alveolar concentration (MAC) for desflurane, we found a positive correlation between age adjusted MAC values and BIS (Sapar et al. 2021). It is well known that MAC values decrease as age increases. We used age-corrected MAC for our patients using Mapleson's formula. We observed that BIS values remained within normal range for general anesthesia.

The authors have delineated the importance of BIS in routine anesthesia practice. Cost-effective modules for awareness monitoring will hopefully increase the usage and eventually become part of anesthesia practice across the board.

#### Abbreviations

BIS Bispectral index  
MAC Minimum alveolar concentration

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#### Authors' contributions

"HK" and "RC" have contributed equally in the preparation of the manuscript. All authors have read and approved the manuscript.

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Not applicable.

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Not applicable.

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare that they have no competing interests.

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