SUMMARY

Awareness is the postoperative recall of sensory perception during general anaesthesia. The incidence is very low and approximates 1/1000. This rare but serious adverse event can be extremely distressing for both the patient as well as the anaesthesiologist. Awareness during anaesthesia may occur despite apparently sound anaesthetic management.

Assessing the depth of anaesthesia remains a challenge for the anaesthesia providers as clinical signs are unreliable and there is no sensitive and specific monitor. Bispectral Index monitoring with the goal of scores <60 has been recommended to prevent awareness.

Over the last 9 years a large body of experimental research has accumulated on the use of the bispectral index in monitoring hypnosis during sedation and general anaesthesia. The FDA has approved this device for titration of hypnosis and for reducing the incidence of awareness during anaesthesia . When anaesthesia is titrated using bispectral index monitoring, patients generally receive lower doses of hypnotic drugs and, as a consequence, they emerge faster from anaesthesia with less postoperative nausea and vomiting. BIS provides clinicians with unique information that can be used to tailor hypnotic drug dose to individual patient requirements .

Let us look forward to the patients' healthy and happy smiles postoperatively and go for a safe drive with titrated, well balanced, and thoughtful anaesthesia!

In the present study, patients were randomly allocated into three equal groups (n=40),where patients received three different techniques of general anaesthesia; group I (propofol TIVA) & group II (propofol-ketamine TIVA) & group III (isoflurane inhalational anaesthesia). Each group is furtherly subdivided into two equal subgroups (n=20) according to, whether BIS-guided anaesthesia within the recommended range (40 to 60) was used or only anaesthesia guided by standard clinical practice.

A highly significant reduction in anaesthetic drug consumption (propofol & isoflurane) was found in the subgroups where anaesthetics were titrated guided by bispectral index monitor than the subgroups where anaesthetics were titrated guided by standard clinical practice. The higher use of anaesthetics in the standard clinical practice subgroups indicates that, the anaesthesia providers tended to use high doses of hypnotics to manage signs of inadequate anaesthesia or analgesia which resulted in too deep anaesthesia.

The recovery times (spontaneous breathing, extubation, time to obay command, time to achieve a modified Aldrete score ≥ 9) were determined at one-minute intervals from discontinuation of anaesthetics ,and they were shorter in the subgroups where anaesthetics were titrated guided by bispectral index monitor than in the subgroups where anaesthetics were titrated guided by standard clinical practice, as anaesthetics may be given excessively to avoid unintentional awareness during anaesthesia . Monitoring of the bispectral index (BIS) of electroencephalogram has helped to bring more precision to the administration of anaesthetics, as well as opioids and muscle relaxants, resulting in improved recovery profiles.

Patients were questioned for recall of events, hearing vague sounds, feeling surgical instruments or dressing application, or dreaming and we did not encounter any case of awareness, in either subgroups. This might be attributed to the very low incidence of awareness, which approximates 1/1000, necessitating a large number of patients in order to encounter one case of awareness.

The incidence of postoperative nausea and vomiting in the first 24 h postoperatively , was lower in BIS subgroups (IA & IIA & IIIA) than in subgroups without aid of BIS (IB & IIB & IIIB)respectively,but these results did not reach a statistically significant value (*P value > 0.05*).

The incidence of postoperative nausea and vomiting was higher in isoflurane group than propofol groups (propofol &propofol-ketamine). Propofol as part of an IV anaesthetic technique is clearly preferable to volatile anaesthetic techniques for the prevention of postoperative nausea and vomiting .