



INCIDENCE OF INTRAOPERATIVE AWARENESS DETECTION IN KANYAKUMARI GOVERNMENT MEDICAL COLLEGE HOSPITAL USING BRICE QUESTIONNAIRE

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ABSTRACT

AIM: The aim of our study was to detect awareness using the Modified Brice questionnaire.

INTRODUCTION: Awareness during general anesthesia is an infrequent but serious problem with potential long-term psychological consequences for the patient and medico-legal implications for the anesthetist. The incidence of awareness has been reported to be between 0.1% and 0.2% in the general surgical population

MATERIALS AND METHODS: After written informed consent 120 ASA PS I, II patients coming for surgeries under general anaesthesia in Kanyakumari government medical college hospital were interviewed using brice questionnaire after 24 hours of surgery. Cardiac surgery, neuro surgery & obstetric surgeries were excluded. The primary outcome studied was the incidence of intraoperative awareness

DISCUSSION: The incidence of intraoperative awareness in the population of Kanyakumari government medical college hospital is 1 in 120 cases (0.83%). In Grading of structured interview answers the awareness incidence comes under grade II.

CONCLUSION: Though the intraoperative awareness in our population is slightly higher than the other studies this may be due to varied genetic make-up and anaesthetic technique.

KEYWORDS : Brice Questionnaire, Intra Operative Awareness

INTRODUCTION:

Awareness during general anaesthesia is an infrequent but serious problem with potential long-term psychological consequences for the patient and medico-legal implications for the anaesthesiologist. The incidence of awareness has been reported to be between 0.1% and 0.2% in the general surgical population in the Western world. Awareness in the Indian population has very limited studies. The incidence of awareness may vary among patient population due to differences in genetic make-up and anaesthetic technique. Some patient may develop posttraumatic stress disorder after intraoperative awareness which may require counselling.

AIM OF THE STUDY:

The aim of our study is to detect incidence of intraoperative awareness using the Brice questionnaire in Kanyakumari government medical college hospital.

MATERIALS AND METHODS:

This study was carried out in Kanyakumari government medical college hospital surgical post-operative ward after institutional ethical committee approval and this study to detect intraoperative awareness using the Brice questionnaire in Kanyakumari government medical college hospital after written informed consent.

Randomized prospective control clinical trial studied for a period of 3 months with 120 patient with ASA physical status I, II patients undergoing surgeries under general anaesthesia under standard protocol in Kanyakumari government medical college hospital were interviewed using brice questionnaire after 24 hours of surgery.

INCLUSION CRITERIA:

Age 20-60 years, written informed consent, all patient undergoing surgery under general anaesthesia under standard protocol of the institution, duration of surgery less than 3 hours

EXCLUSION CRITERIA:

Patient's refusal, ASA Grade 3 & 4, Any procedure substituted to general anaesthetic technique (Orthopaedic surgery –

GA+ Regional block), emergency surgery Ongoing psychiatric medication, Altered sensorium, Language barrier, Odd of hearing, Cardiac surgery, Obstetrics and Neurosurgery, eventful intraoperative and postoperative period, chronic alcoholic

INTERVENTION:

All patients undergoing elective surgery under general anaesthesia assessed preoperatively. Comorbidities, H/O of previous surgery and intraoperative events in previous surgery were recorded. Demographic data age, BMI, were recorded. All patients will receive premedication with Inj. Ranitidine & Inj. Metoclopramide intravenously preoperatively. In the operation theatre, after securing 18-gauge venflon cannula. Baseline cardiorespiratory parameters (non-invasive blood pressure, Oxygen saturation, Pulse rate, and electrocardiogram) were recorded using Anaesthesia monitor- Philips sure sign. Non invasive blood pressure measured in the Right upper arm. Patient premedicated with Inj glycopyrrolate 0.2 mg, Inj. Fentanyl 2 mcg/kg given to reduce the stress response, preoxygenated with 100% oxygen for 3 minutes, induced with Inj. Propofol of ideal body weight, muscle relaxant with Inj. succinylcholine 2mg/kg. Using conventional laryngoscope patient intubated with appropriate size endotracheal tube. Anesthesia Maintained with Nitrous oxide and oxygen in the ratio 66:34%, sevoflurane with 1 MAC, Inj. Atracurium & Inj. Fentanyl in graded doses according to the duration of surgery. Intra operative events were recorded. Post operatively patient interviewed with brice questionnaire within 24 hours after patient is fully awake.

MODIFIED BRICE QUESTIONNAIRE:

1. What is the last thing you remember before going to sleep?

-Being in the pre-op area ☐ -Seeing the operating room ☐ -Being with family ☐ -Hearing voices ☐ -Feeling mask on face ☐ -Smell of gas ☐ -Burning or stinging in the IV line ☐ -Others _____

2. What is the first thing you remember after waking up?

-Hearing voices ☐ -Feeling breathing tube ☐ -Feeling mask on

face ☐ -Feeling pain ☐

-Seeing the operating room ☐ -Being in the recovery room ☐ -
Being with family ☐ -Being in ICU ☐ -Nothing ☐ -
Others _____

3. Do you remember anything between going to sleep and waking up?

-No ☐ -Yes: -Hearing voices ☐ -Hearing events of the surgery ☐
-Unable to move or breathe ☐ -Anxiety/stress ☐ -Feeling pain ☐
-Sensation of breathing tube ☐ -Feeling surgery without pain ☐ -Other _____

4. Did you dream during your procedure?

-No ☐ -Yes ☐ -What about _____

5. Were your dreams disturbing to you?

-No ☐ -Yes ☐

6. What was the worst thing about your operation (please tick box)?

-Anxiety ☐ -Pain ☐ -Recovery process ☐ -Unable to carry out
usual activities ☐
-Awareness ☐ -Others _____

OUTCOME:

Primary outcome: Incidence of intra operative awareness

Secondary outcome: Incidence of awareness in different duration of surgeries, Incidence of awareness in different age group, Grading of structured interview answers.

GRADING OF STRUCTURED INTERVIEW ANSWERS:

Grade 1 -Patients with unclear memories or dreams, which could be of intraoperative origin.

Grade 2 -Patients with short periods of awareness occurring either intraoperatively or during the period of awakening from anesthesia.

Grade 3 -Patients with long-lasting, clear, and undisputed recall of the intraoperative period

STATISTICAL ANALYSIS:

Microsoft word & excel have been used to generate graphs, tables.

RESULTS:

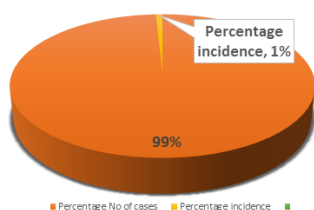


Fig 1. INCIDENCE OF AWARENESS

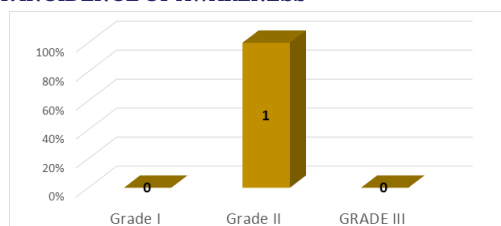


Fig 2. GRADING OF AWARENESS

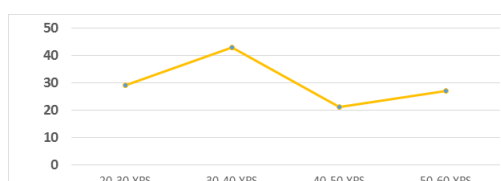


Fig 3 :AGE WISE DISTRIBUTION

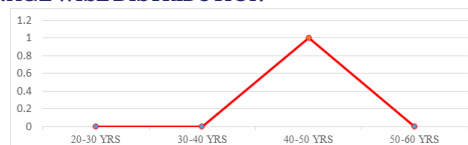


Fig 4: AGEWISE DISTRIBUTION OF INCIDENCE

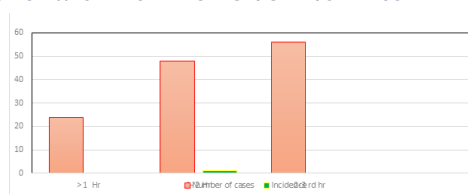


Fig 5: DURATION OF SURGERY AND ITS INCIDENCE:

DISCUSSION:

The incidence of intraoperative awareness in the population of KGMCH is 1 in 120 cases (0.83%).

In grading of structured interview answers the patient fall into grade II.

There were no significant differences between groups concerning to age distribution, duration of surgery and anesthesia

Brice questionnaire is a useful tool to assess postoperatively and to find the intraoperative awareness, though there may be a recall error bias in the patient, this is inexpensive and easy and can be used in institution where BIS and gas monitor not available.

Evidence suggests a maintenance anesthetic using a BIS-guided technique with the BIS titrated to 40 to 60 is effective at preventing awareness (as is an end-tidal anesthetic gas concentration > 0.7 MAC). Anesthetic awareness can occur with:

- Low anesthetic delivery: error or interruption of delivery; use of only nitrous oxide for maintenance anesthesia.
- Patients with low cardiovascular reserve: pregnancy, hypovolemia, or cardiac failure (caesarean section, cardiac surgery, emergency surgery, trauma surgery).
- patients with high anesthetic requirement: tolerance to sedative medications (chronic alcohol, benzodiazepine, or opioid use)
- These patients were excluded from our study.

CONCLUSION:

- Brice questionnaire is a simple tool to assess postoperatively and to find the incidence of intraoperative awareness.
- The practice to visit the patient for intraoperative awareness by the anaesthesiologist provide a good platform to improve the psychological condition of the patient postoperatively.
- Grading of the awareness is important to identify the severity.
- Though the intraoperative awareness in our population is slightly higher than the other studies this may be due to varied genetic make-up and anaesthetic technique & may be linked to the lighter plane of anaesthesia.

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