MINIMUM MONITORING STANDARDS FOR SAFE PRACTICE OF ANAESTHESIA

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ABSTRACT
On this 164th year celebration of world Anaesthesia day we should update our knowledge and practice safe anaesthesia. The “objective of WFSA & ISA is “safe anaesthesia saves life” - stressing the need for minimum monitoring standards under the existing ISA guidelines. Monitoring is an essential part of anaesthesia care. Effective monitoring reduces the potential for poor outcomes that may follow anesthesia by identifying derangements before they result in serious or irreversible injury. WFSA, in the year 1992 approved the basic monitoring standards formed by international task force. The Indian Society of Anaesthesiologists (ISA) take guidelines from WFSA from 30/12/1999 are considered as national standards applicable for anaesthesia services in any part of the country.

Keywords: Monitoring Standards, WFSA, ISA

INTRODUCTION
Two Standards For Basic Anaesthesia Monitoring (American Society of Anesthesiologists, 2000; Association of Anaesthetists of Great Britain and Ireland, 1989)
(Approved by the ASA House of Delegates on October 21, 1986, and last amended on October 25, 2005)
Standard I for Monitoring Includes:
The presence of a qualified Anaesthesiologist in the operating room at all times to monitor the pt continuously and modify anesthesia care based on clinical observations and responses of the pt to treatments.
Standard II Specifies:
During all anaesthetics patient’s oxygenation, ventilation, circulation & temperature shall be continuously evaluated
WFSA Revised International Standards for a Safe Practice of Anaesthesia in 2008
Revised Monitoring Standards
Highly recommended – MINIMUM MANDATORY monitoring for Level 1 setting for basic infrastructure (Rural set up)
Highly recommended + recommended -- Level 2 setting for intermediate infrastructure (District hospital)
Highly recommended + recommended + suggested --- Level 3 setting for optimal infrastructure (Referral hospital)
A. Oxygenation
(i) Oxygen Supply
Adequate oxygen supply is highly recommended for all patients undergoing general anaesthesia. Fi02, oxygen supply failure alarm and a device protecting against the delivery of an hypoxic gas mixture is Recommended
(ii) Oxygenation of the Patient
Tissue oxygenation should be monitored continuously clinically & pulse oximetry is Highly recommended
Research Article

**B. Airway and Ventilation**
i) Clinical & continuous monitoring with a precordial, pretracheal, or oesophageal stethoscope is recommended

ii) Capnography is recommended

iii) When mechanical ventilation-- a "disconnect alarm" should be used throughout the period of mechanical ventilation is recommended

iv) Continuous measurement of the inspiratory and expired gas volume & concentration of volatile agents is suggested.

**C. Circulation**

(i) Cardiac Rate and Rhythm
Clinical & continuous monitoring by pulse oximeter is highly recommended. Electrocardiograph is recommended.

The availability of a defibrillator is recommended.

(ii) Tissue Perfusion

Clinically & by pulse oximeter is highly recommended capnograph is Recommended

(iii) Blood Pressure

Clinically should be checked every 5 minutes by sphygmomanometer. Non Invasive Blood Pressure monitoring (NIBP) & intraarterial blood pressure monitoring in appropriate cases is suggested

**D. Temperature Monitoring**

Recommended in prolonged anaesthesia & extremes of age

**E. Depth of Anaesthesia**

Bi spectral index monitoring is not universally recommended but Suggested in high risk of awareness in general anaesthesia & neuro anaesthesia.

**F. Neuromuscular Monitoring**

Any major surgery requiring prolonged period & for any special surgery neuromuscular monitoring is recommended

The Audible Five Alarms (Prys-Roberts and Brown, 1996; Thompson and Mahajan, 2006)

During Routine Anesthesia Care a Minimum of 5 Alarms Must Be In Use

1. Inspired oxygen and a low O2 limit alarm
2. Airway pressure limit alarm
3. Oximetry
4. Blood pressure limit alarm
5. Heart Rate limit alarms

Recovery & Post-Anaesthesia Care (Task Force Report, 2006; WFSA, 2008)

All patients should be observed and monitored for level of consciousness, vital signs, medical condition with emphasis on the adequacy of oxygenation, ventilation, circulation, and temperature.

Pulse oximetry is highly recommended until consciousness has recovered.

REFERENCES


