

Sedation Practice for Paediatric Auditory Electrophysiology

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Sedation – Paediatric Electrophysiology

- ▶ Late age of identification of hearing loss in SA
- ▶ Linguistic and practical challenges with behavioural testing
- ▶ Increased use of electrophysiology with older children
- ▶ Increased need for sedation



Guidelines for the safe use of procedural sedation and analgesia for diagnostic and therapeutic procedures in children: 2010

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SAJAA

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SAJAA Definition of Sedation

- ▶ Continuum of altered state of consciousness, varying from minimal sedation and anxiolysis to deep sedation.
- ▶ The response that individual patients will have to the administration of sedatives is difficult to predict. The **drugs used**, the **dosages administered**, the **additive effects of concomitant drugs** and the **patient's pharmacogenetic profile** will all impact on the depth of sedation. **An unexpected progression of the depth of sedation must therefore be anticipated, and practitioners must be able to rescue patients who enter a deeper level of sedation than intended.**

South African Paediatric Sedation Guidelines

- ▶ SAJAA (2010)
 - drugs recommended,
 - essential equipment,
 - recommendations for monitoring based on the sedation methods used,
 - discharge criteria and
 - recommended documentation before and after sedation)

SURVEY DETAILS – n=33

- ▶ To determine what medication was being used for sedation and how this was managed across the public and private sectors, a survey was mailed to audiologists conducting ABR testing in 3 SA provinces (Gauteng, Kwazulu Natal and Western Cape).

Medications Used

- ▶ Propofol, midazolam , ketamine, presidix and ketofol
- ▶ Propofol is a controversial drug outside operating theatre.
- ▶ Combination of vallergran and midazolam
- ▶ Vallergran – **unsuitable for the out-patient or ambulatory setting.**
- ▶ Combination of vallergran and risperdal
- ▶ Risperdal – **unsuitable for the out-patient or ambulatory setting.**

Medications Used

- ▶ Atarax and melatonin
- ▶ Droperidol
- ▶ Chloral hydrate
- ▶ Sevoflurane
- ▶ Inapsin
- ▶ Atarax – sedative to treat anxiety and tension.
- ▶ Droperidol – not recommended for out-patient procedures.
- ▶ Safe for use
- ▶ Not included in SAJAA (2010) guidelines
- ▶ Inapsin– not recommended for sedation for out-patient procedures.

Findings – Medications Used

- ▶ There is a difference in sedation medication used across provinces as well as across healthcare sectors.
- ▶ Vallergran – most commonly used sedative medication in the Gauteng public sector and in the KZN public and private sectors.
- ▶ Vallergran – not suitable for out-patient settings due to its long duration of action (SAJAA, 2010).
- ▶ Inapsin – used in the Gauteng private and KZN public sectors
- ▶ Inapsin – not recommended for use in out-patient settings as it has a long duration of action (SAJAA, 2010).

Findings– Medications Used

- ▶ Midazolam used in conjunction with other depressant drugs could result in respiratory and cardiac depression. Used with Vallergran in the Gauteng public sector.
- ▶ Propofol – unsafe outside the operating theatre, although a combination of Propofol and Ketamine decreases the likelihood of side effects of both these drugs (SAJAA, 2010). Both these drugs and their combination are used in the Gauteng public sector.

Findings– Medications Used

- ▶ Chloral hydrate – safe for use, BUT sedative effects are unreliable over the age of three years (SAJAA, 2010).
- ▶ Sevoflurane, used in the KZN public sector – not included in the list of sedative drugs in the SAJAA (2010) guidelines. An inhalation anaesthetic.

Sedation Medication

- ▶ Varied
- ▶ Drugs not recommended for outpatient settings are being used for electrophysiology audiology testing
- ▶ Guideline compliance

Feedback from Leading Anaesthetists (Published in SA Journal of Anaesthesia and Analgesia)

Rebecca Gray* and James Roelofse– Department of Anaesthesia and Perioperative Medicine, UCT; Cape Town Red Cross War Memorial Children's Hospital, University College, London, United Kingdom

- ▶ Regarding 'Sedation for paediatric auditory electrophysiology in South Africa, we thank the authors for publishing their research thereby giving us documentary proof of what we know to be widespread practice
- ▶ We share your concerns about safe sedation practice
- ▶ Accreditation for standards of practice for the provision of sedation and analgesia for children is necessary, and is imminent.
- ▶ Sedation needs to become a formal part of anaesthetic registrar training, including supervised training in the practice of sedation
- ▶ We also note with interest your comments about drugs in the paediatric population. Airway obstruction is always a possibility with the administration of sedating drugs in small children.

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