

## Scandinavian SSAI clinical practice guideline of awareness under general anesthesia for emergency caesarian section using propofol as an induction agent.

Sotka-Rantala S<sup>1</sup>, Korneliussen J<sup>2</sup>, Karjalainen L<sup>3</sup>, Hemph A<sup>4</sup>, Bodin E<sup>5</sup>

### Abstract

**Background:** Awareness during general anesthesia is traumatic for the patients, in particular if it is associated with a sensation of pain. The incidence of awareness is 0,1 % to 0.9 % in the general population. Obstetric patients undergoing general anesthesia is correlated with an even higher risk of awareness. Ways of measuring awareness, although challenging, are subjective signs reported from the patients such as dreams and nightmares, as well as objective signs measured perioperatively for example, BIS monitoring and hemodynamic changes. The aim of this guideline is to see if propofol as an induction agent would give less incidence of awareness compared to thiopental in acute cesarean section.

**Method:** Literature search, in PubMed and Embase, was based on articles that included obstetric anesthesia, emergency caesarian section, awareness and induction agents. The PICO method was used to build the clinical question where propofol was compared to thiopental as an induction agent. GRADE evaluation to assess the quality of evidence and make the recommendation was used.

**Results:** Nine articles were found but only three were relevant and selected. One study was a prospective cohort study from 2017-2018: focusing on detecting awareness, by subjective signs through interviews, in patients undergoing general anesthesia for obstetric surgery.

The second article was a systematic review and meta-analysis from 2015-2017; comparing different induction agents for general anesthesia in cesarean section. Awareness is a secondary outcome in this review.

The last study was a prospective cohort study from 2015 looking into objective signs; BIS and hemodynamic changes perioperatively, that could indicate awareness.

### Discussion and conclusion

All in all, the quality of evidence is weak. One of the main challenges is to measure awareness in accurate ways, another is the lack of relevant studies that are comparable. However, all articles favor propofol as an induction agent regarding awareness in patients undergoing cesarean sections. The recommendation hence is to use propofol as an induction agent, but further studies are needed.

---

<sup>1</sup>Department of Anesthesiology and Intensive Care, Helsinki University Hospital, Helsinki, Finland

<sup>2</sup> Department of Anesthesiology and Intensive Care, Stavanger University Hospital, Stavanger, Norway

<sup>3</sup> Department of Anesthesiology and Intensive Care, Helsinki University Hospital, Hyvinkää, Finland

<sup>4</sup> Department of Anesthesiology and Intensive Care, Danderyd Hospital, Stockholm, Sweden

<sup>5</sup> Department of Anesthesiology and Intensive Care, Södertälje Hospital, Södertälje, Sweden