EEG-based monitoring of anesthetic depth

Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' conclusions
Summary and Conclusions
SBU's appraisal of the evidence: EEG-based monitoring of anesthetic depth is intended to complement traditional monitoring methods during anesthesia. Its primary aim is to adapt anesthesia to individual needs so patients can recover more quickly and be at lower risk for awareness while under anesthesia.

Patients at normal risk of awareness who undergo elective surgery

EEG-based monitoring of anesthetic depth reduces by a few minutes the early phase of recovery after intravenous anesthesia (Evidence Grade 3)*. The time saved has not been shown to have any clinical or economic significance. Whether or not monitoring of anesthetic depth affects the early phase of recovery after inhalational anesthesia cannot be determined (Contradictory Scientific Evidence)*. Regarding the later phase of recovery (eg, time until discharge), scientific evidence on the effects of EEG-based monitoring of anesthetic depth is contradictory*.

Whether or not EEG-based monitoring of anesthetic depth reduces the risk of awareness during anesthesia cannot be assessed (Insufficient Scientific Evidence)*. Whether or not EEG-based monitoring of anesthetic depth has any effect on patient satisfaction, or on the incidence of post-anesthesia nausea/vomiting, cannot be determined (Contradictory Scientific Evidence)*.

Patients at high risk of awareness during anesthesia, or who undergo emergency surgery

Whether or not EEG-based monitoring of anesthetic depth in risk patients has a positive effect on post-anesthesia recovery (Insufficient Scientific Evidence)*, or reduces the risk of awareness during anesthesia (Contradictory Scientific Evidence)*, cannot be determined.

In summary, as regards general anesthesia, the scientific evidence is inadequate to support routine use of EEG-based monitoring of anesthetic depth aimed at reducing the incidence of awareness or decisively improving patient recovery.

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INAHTA brief and checklist

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Address for correspondence
P.O. Box 3657, SE-103 59 Stockholm, Sweden Email: Johan Wallin wallin@sbu.se

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