

Journal Watch

Bispectral Index Monitoring in Unconscious Palliative Care Patients

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Abstract:

This pilot study looks at the clinical application of bispectral index (BIS) monitoring within the palliative care situation. Using this instrument, the level of awareness in 12 patients was tracked from the onset of unconsciousness until death, and the levels were then related to the patients' clinical state and treatment. The results give a surprising insight into the nature of unconsciousness in dying patients and the effects of treatment. The monitor proved to be a simple, effective, and acceptable method of assessing awareness in palliative care patients. A few minor problems were encountered in adapting it to the palliative care situation, but most of these were overcome as we became more familiar with the instrument. The study suggests that BIS could contribute significantly to patient care and lead to a better understanding of the dying process.

Comments:

Strengths/uniqueness:

This study was an interesting attempt to evaluate the level of awareness of unconscious patients. The authors did attempt to exclude agitated, delirious and demented patients. The apparent effects of midazolam and phenobarbitone on the level of awareness were contrasted and it was felt that midazolam did not affect awareness level whereas phenobarbitone did; however, no mention was made of the large dose of phenobarbitone used in this study. It was suggested that conventional medicines used in common doses do not hasten death.

Weaknesses:

Although patients with delirium were to have been excluded, the description of the patients who were being assessed leads one to wonder whether they were in a hypoactive delirium and that the fluctuations in BIS might actually represent hallucinations instead of REM sleep. Whether a technology that has provided evidence of unconscious perception in relatively health anesthetized patients can be used for the same purpose in patients who are hours or days from death may be questionable. Concerns have been raised in other fields about the nature of what BIS is actually measuring. It seems to be measuring an aspect of awareness, but whether this relates to awareness of pain is debatable. For example, an increase in the BIS could respond to pain, touch, and auditory stimuli or even (as pointed out in the article) the use of an electric bed. The BIS was initiated upon the development of unconsciousness, but entering this state necessitates changes in medications that may have biased results. A further examination of the interrelated factors that may have led to the unconscious state would have been helpful; as would lists of the other medications and hydration the patients were on. Correlation of the

change in BIS with any available blood work i.e. indices of renal function might have been interesting.

Relevance to Palliative Care:

Patients' families are often concerned that they are making appropriate decisions for their loved ones, particularly in a situation where the patient cannot speak for himself or herself. Although this tool would not appear to be appropriate for use in our palliative care practice, development of a valid assessment tool for measuring awareness of pain in an unconscious patient would be valuable for patients, family members and caregivers.