EEG-GUIDED ANESTHESIA FOR THE TREATMENT OF SEVERE DEPRESSION

MEDICAL DEVICES
Closed-loop system that automatically adjusts anesthetic levels to enable depression treatment.

TECHNOLOGY TYPE
Anesthesiology

STAGE OF DEVELOPMENT
Developing concept.

TECHNOLOGY SUMMARY
Treatment-resistant depression is sometimes treated by electroconvulsive therapy (ECT), where the patient is anesthetized and administered electric shocks to the skull. However, acceptance of ECT is limited because of the potential for memory loss and the perceived crudeness of the procedure.

Research has indicated that inactivation of certain parts of the brain - through deep anesthesia - for a period of time can also have positive effects on severe depression. The properly reduced level of brain activity needed to treat severe depression is indicated when an electroencephalogram (EEG) shows a “burst suppression” pattern. This invention describes a closed-loop system where the anesthetic delivery system monitors the patient’s EEG and automatically adjusts the flow of anesthesia to keep the brain at the proper level of activity to treat depression.

FEATURES AND BENEFITS
- Reduces the risk of memory loss.
- Perceived as a safe, humane treatment.
- Offers a higher success rate.

LEARN MORE
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