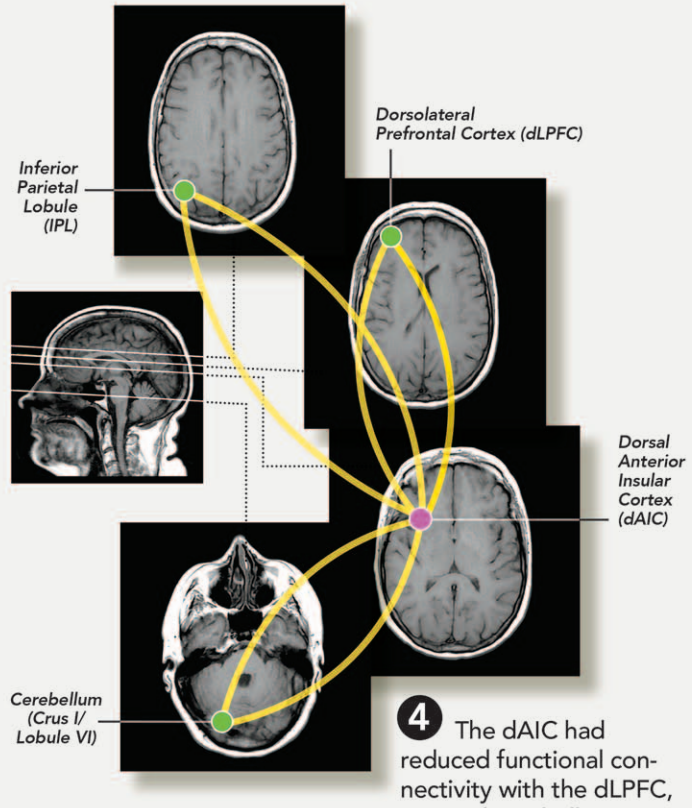
ANESTHESIOLOGY

Unraveling the Neurobiology of Consciousness:
Anesthesia, Loss of Behavioral Response to Stimuli, and Functional Connectivity in the Brain

1 Unconsciousness is a cardinal feature of general anesthesia, yet mere unresponsiveness can still be associated with conscious experience.

2 Using ultraslow induction of anesthesia with propofol, fMRI, and EEG, researchers investigated[1] the functional neuroanatomy of LOBR.

3 After LOBR, the dAIC response to pain and sound was suppressed, yet the brain remained responsive to these stimuli in other regions.



4 The dAIC had reduced functional connectivity with the dLPFC, IPL, and cerebellum.

5 These findings may impact our understanding of intraoperative awareness and have implications for consciousness itself.[2]

EEG = multichannel electroencephalography; fMRI = functional magnetic resonance imaging.

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