

Supplemental digital content 2:

Figure 1:

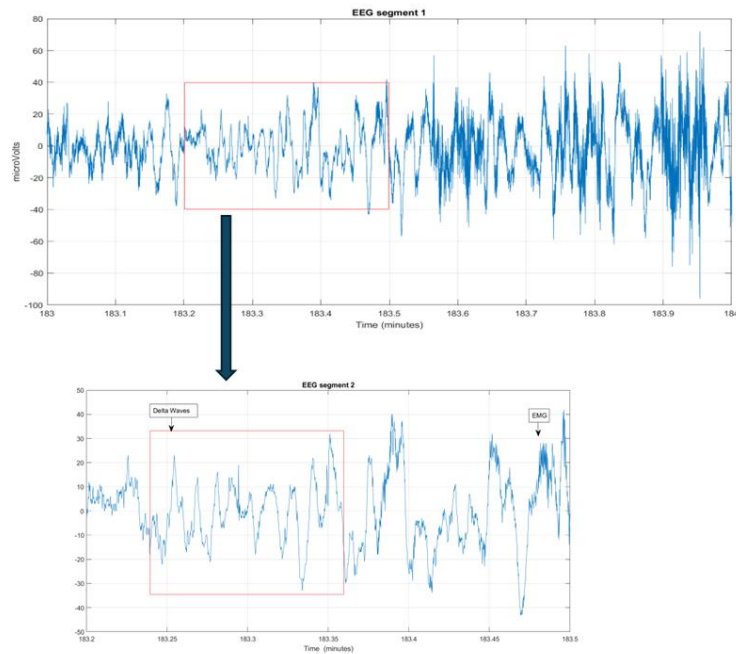


Figure 1: The top panel (EEG segment 1) illustrates the raw EEG data recorded between 183 to 184 minutes. Segments on either side of the red box are due to movement artifacts. The red box highlights the portion of the EEG that had delta waves. The lower panel (EEG segment 2) is an enlarged view of the same red box from above, with markers indicating slow delta waves and EMG. This figure highlights the segments in the raw EEG that were free of EMG and enabled us to determine delta power immediately before extubation (at 185 minutes).

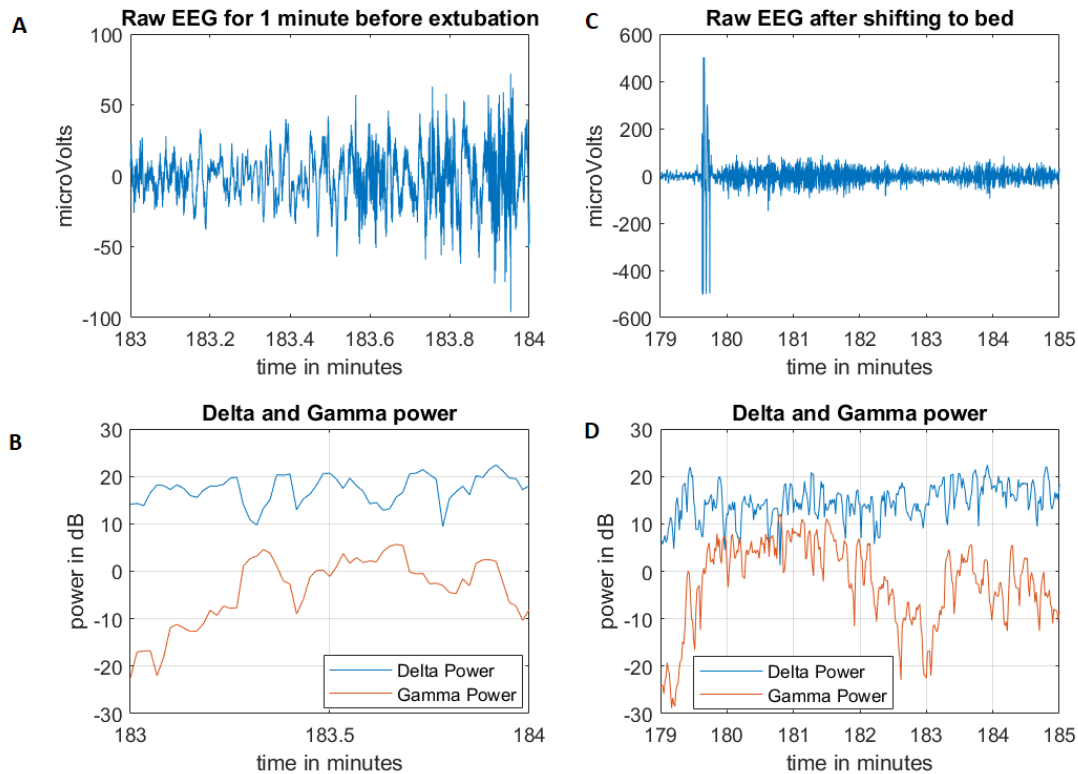


Figure 2: Raw EEG for two-time segments and the corresponding delta and gamma power changes. Panel A: Raw EEG captured over a one-minute segment, as depicted in Figure 1 above. For the same segment illustrated in Figure 1. Intermittent segments within this period are devoid of EMG interference. Panel B: Delta and gamma power changes. For this short period, the EEG delta power was around 10dB. Panel C: Raw EEG from 179 minutes to 184 minutes. At 179 minutes, there was EMG interference due to movement associated with shifting the patient from the operating table. Panel D: Changes in delta and gamma power over the same time as in panel C, illustrating the movement and noise-related segments with relatively higher gamma power. At 183 minutes, the delta power has not been influenced by movement-associated changes in the EEG since the gamma power around this time is relatively low. The gamma power was extracted from the power spectrum corresponding to a frequency of 35 Hz, and delta power was extracted from the 1 Hz frequency.

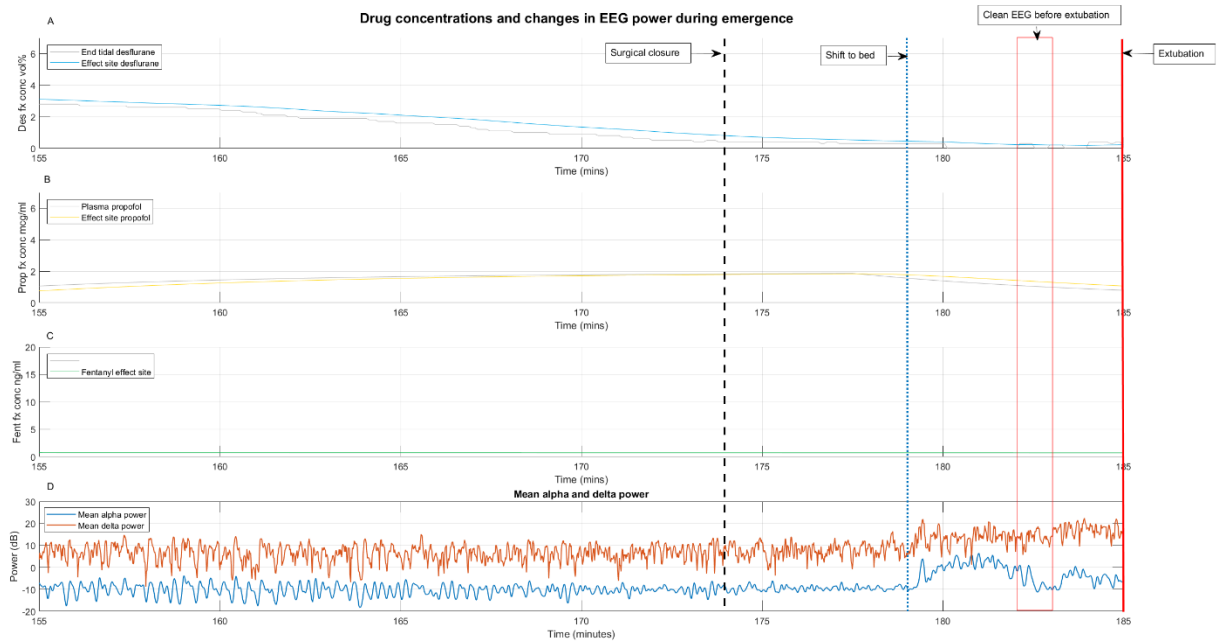


Figure 3: Changes in effect site drug concentrations for the last 30 minutes. Panel A-C: Effect site desflurane, propofol, and fentanyl concentrations, respectively. Panel D: Mean alpha and delta power for the same duration. The dashed black line indicated the point of completion of surgical closure. The dotted blue line indicates when the patient was shifted to the bed, and the red box indicates the segment we looked at to determine delta power before extubation. The red line corresponding to the 185-minute mark is the extubation time.