Conscious Experience and Psychological Consequences of Awake Craniotomy

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BACKGROUND
Experiencing cranial surgery under awake conditions may expose patients to considerable psychological strain.

METHODS
This study aimed to investigate the occurrence and course of psychological sequelae following awake craniotomy (AC) for brain tumors in a series of 20 patients using a broad, validated psychological assessment pre-, intra-, postoperatively and a standardized follow-up of 3 months. In addition, the association of the preoperative psychological condition (including, but not limited to, anxiety and fear) with perioperative pain perception and interference was assessed.

RESULTS
AC did not induce any shift in the median levels of anxiety, depression, and stress symptoms already present prior to the procedure. Furthermore, anxiety and depression were all moderately to strongly associated over time (all \( p < 0.05 \)). Stress symptoms also correlated positively over all times of measurement. Stress three days after surgery was strongly associated with stress three months after surgery (\( p < 0.001 \)), while the correlation between pre- and immediate postoperative stress showed a statistical trend (\( p = 0.07 \)). Preoperative fear was not related to intraoperative pain, but to pain and its interference with daily activity on the third postoperative day (\( p < 0.001 \) and \( p < 0.01 \), respectively).

CONCLUSION
Postoperative psychological symptoms clearly correlated with their corresponding preoperative symptoms. Thus, mental health was not negatively affected by the awake craniotomy experience in our series. Intraoperative fear and pain were not related to the preoperative psychological condition. However, preoperative fear and anxiety were positively related with pain and its interference with daily activity in the immediate postoperative period.
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