DEXMEDETOMIDINE FOR AWAKE CRANIOTOMY: A SINGLE CENTER EXPERIENCE

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Argomento: Neuroanestesia e neurorianimazione

BACKGROUND: Awake craniotomy is a challenge for anesthesiologists. Literature suggests a context – sensitive approach according to surgical and clinical setting (1). Discomfort, pain and anxiety are often unmet patient's needs (2). Airway management still represents crucial intraoperative issue. Dexmedetomidine is "pleiotropic" in providing cooperative sedation, opioid and hypnotic – sparing effects without respiratory depression (3). The aim of this pilot study is to examine if dexmedetomidine in association with scalp nerve block is a safe and effective approach to an "awake throughout" craniotomy without the need of airway instrumentation.

MATERIALS AND METHODS: We performed a retrospective data analysis of 67 patients who underwent awake craniotomy from 2016 to 2018. In order to improve patient's comfort, since 2016 we adopted a sequential approach focused on dexmedetomidine as first line sedative. No pins and head fixation were requested by our neurosurgeons.

RESULTS: The median length of surgery was 180 min (max 315 - min 65). Dexmedetomidine was used in 96% of patients and was associated with remifentanil in 44% of patients. Spontaneous breathing was maintained from the beginning to the end of surgery. The main results are presented in Table 1 and 2.

CONCLUSIONS: No respiratory adverse events and no planned airway instrumentation are confirmed advantages of dexmedetomidine choice for awake craniotomy (4).

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Age and comorbidities	
Median Age (yrs)	43 (23 – 80)
ASA 3	5 (3.35 %)
> 1 antiepileptic drug	8 (5.36 %)
BMI > 30	5 (3.35 %)

Table 1. Values are expressed as median (min – max) or absolute value followed by percentage.

Adverse events	
Failed awake	2 (1.34 %)
Conversion to general anesthesia	2 (1.34 %)
Seizures	6 (4.02 %)
Early new neurological deficit	7 (4.69 %)
Post-operative ICU	7 (4.69 %)
Median Hospital LOS (days)	6 (3 -9)

Table 2. Values are expressed as median (min – max) or absolute value followed by percentage.