



Asleep Awake Asleep Craniotomy: Postoperative Pain Experience

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BACKGROUND

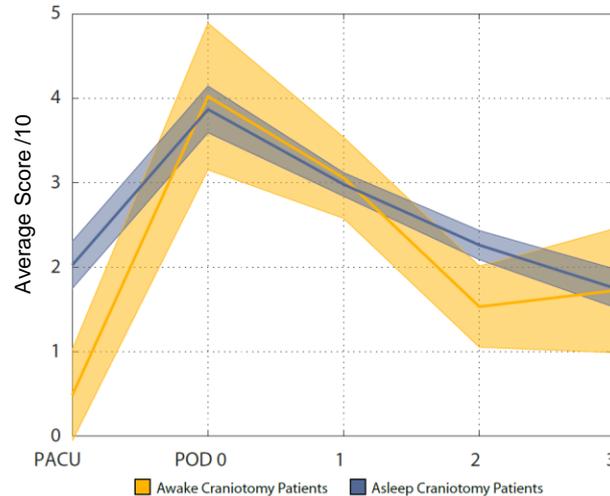
De Benedittis et al. showed that as many as two thirds of patients experience moderate to severe pain within the first 48 hours following craniotomies (1). Pain induced hypertension has been implicated as a cause of secondary intracranial hemorrhage (2). A meta-analysis of 320 patients evaluated the effectiveness of SNB found a significant reduction of pain at 1 hour postoperatively with documented effects lasting up to 12 hours after surgery (3). We evaluated the efficacy of scalp nerve blocks (SNB) prior to incision for awake craniotomies at our institution throughout the first 5 postoperative days (POD).

METHODS

Electronic medical record (EMR) system was reviewed to identify all cases of either awake or standard asleep craniotomy surgery at our main operating suite from March 2013 to March 2014. Adult patients who underwent supratentorial craniotomy under general anesthesia (GA) without SNB and adult patients who underwent supratentorial craniotomy with awake intraoperative functional mapping and pre-incisional SNB.

Post-Op Day	Awake Patient Count	Asleep Patient Count
PACU	9	92
0	16	156
1	14	154
2	16	147
3	10	108

Mean Pain Scores by Post Operative Day



ANALYSIS

PACU pain scores were divided into 4 categories; 0, 1-4, 5-6, and 7-10. The groupings were based on our definition of moderate pain as a score > 5/10 and severe pain as a score > 7/10. Using a one-way analysis of variance (Kruskal-Wallis Test), we were able to demonstrate that awake patients who received SNB had significantly lower pain scores in the PACU (p= 0.0209).

Count of PACU Pain Scores

Pain Score Values	Awake	Asleep
0/10	37	286
1/10 - 4/10	0	70
5/10 - 6/10	4	55
7/10 - 10/10	1	50

CONCLUSIONS

The understanding of our own pain scores gives us an understanding of our local pain experience and a target for improvement. In any case, the evidence favoring use of SNB given that the procedure is benign may have advantages for patient as they wake up immediately following surgery.

REFERENCES

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