

# Postcraniotomy acute pain

Standardization of [pain management](#) is a key element of enhanced recovery [protocols](#).

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The physical processes of [incision](#), [traction](#) and [hemostasis](#) used for [craniotomy](#), stimulate [nerve fibers](#) and specific [nociceptors](#), resulting in [postoperative pain](#). During the first 24 h after [craniotomy](#), 87% of patients have postoperative [pain](#). The rate of suffering [pain](#) after [craniotomy](#) falls 3% for every year of life.

The objective of a study of Santos et al. was to review the available therapeutic options to help physicians treating this pain, and discuss pain mechanisms, [pathophysiology](#), [plasticity](#), [risk factors](#) and psychological factors. This is a [narrative review](#) of the literature from 1970 to June 2019. Data were collected by doing a search in PubMed, EMBASE, Cochrane Reviews and a manual search of all relevant literature references. The literature includes some drugs treatment: [Opioids](#), [codeine](#), [morphine](#), and [tramadol](#), anti-inflammatory non-steroids such as [cyclooxygenase-2 inhibitors](#), [gabapentin](#). It discusses: side effects, pharmacodynamics and indications of each drug, anatomy and Innervation of Skull and its Linings, pathogenesis of pain Post-craniotomy, scalp nerve block, surgical nerve injury, neuronal plasticity, surgical factors and chronic post-surgical pain <sup>1)</sup>.

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A study aimed to evaluate pain in the pre and postoperative period of patients submitted to craniotomy. This prospective research was carried out at the neurosurgery unit of a large Brazilian hospital. For a quantitative evaluation of pain, the verbal numeric 0-10 rating scale was used. Forty patients with a mean age of 36 years were evaluated. In the preoperative period, 34 (85%) patients indicated headache as the main cause of pain. In the postoperative period, 37 (93%) patients complained of pain while three (7%) reported absence of pain. Pain peaks were observed on the 2nd postoperative day, when 12 (32%) of the patients reported severe pain and 10 (27%) moderate pain. Absence of severe pain occurred after the 8th postoperative day. It was concluded that protocols of analgesia in craniotomy are needed, such as training nurses to better evaluate and handle pain <sup>2)</sup>.

## References

<sup>1)</sup>

Santos CMT, Pereira CU, Chaves PHS, Tôrres PTRL, Oliveira DMDP, Rabelo NN. Options to manage postcraniotomy acute pain in neurosurgery: no protocol available. Br J Neurosurg. 2020 Sep 23;1-8. doi: 10.1080/02688697.2020.1817852. Epub ahead of print. PMID: 32966104.

<sup>2)</sup>

Peón AU, Diccini S. Dor pós-operatória em craniotomia [Postoperative pain in craniotomy]. Rev Lat Am Enfermagem. 2005 Jul-Aug;13(4):489-95. Portuguese. doi: 10.1590/s0104-11692005000400005. Epub 2005 Sep 29. PMID: 16211171.

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