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Perioperative psychological distress in patients with intracranial tumors; a single center study

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Abstract

Purpose: Distress Thermometer (DT) was adopted to evaluate distress in neuro-oncology on a scale from 1 to 10. DT values above 4 indicate major distress and should initiate psycho(onco)logical co-therapy. However, data about peri-operative distress is scarce. Hence, we evaluated peri-operative distress levels in a neurosurgical patient cohort with various intracranial tumors using the DT.

Methods: We conducted a retrospective study including inpatients with brain tumors who underwent surgery in our department between October 2015 and December 2019. Patients were routinely assessed for distress using the DT before or after initial surgery. A comparative analysis was performed via Wilcoxon rank-sum test.

Results: 254 patients were eligible. Mean DT value of the entire cohort was 5.4 ± 2.4. 44.5% (n = 114) of all patients exceeded DT values of ≥ 6. In our cohort, poor post-operative neurological performance and occurrence of motor deficits were significantly associated with major distress. When analysed for peri-operative changes, DT values significantly declined within the male sub-cohort (6.0 to 4.6, p = 0.0033) after surgery but remained high for the entire cohort (5.7 and 5.3, p = 0.1407). Sub-cohort analysis for other clinical factors revealed no further significant changes in peri-operative distress.

Conclusion: Distress levels were high across the entire cohort which indicated a high need for psychological support. Motor deficits and poor post-operative neurological performance were significantly associated with DT values above 6. Distress levels showed little peri-operative variation.

Keywords: Brain tumor; Distress; Neuro-oncology; Peri-operative distress.