

ABSTRACT NO:10
RESEARCH ARTICLE**Predictors of Prolonged Hospital Stay After Craniotomy for Tumour Resection**Zanib Javed¹, Areej Khuwaaaja², Roha Sitwat³, Ayesha Sohail⁴, Hafiza Fatima Aziz⁵, Nida Zahid⁶, Saqib Kamran Bakhshi⁷**Abstract**

Objective: Prolonged length of hospital stay (LOS) after craniotomy for tumour resection is associated with increased healthcare costs, postoperative complications, and resource utilization. Identifying predictors of prolonged LOS may facilitate perioperative optimization and improve patient outcomes.

Methods: A retrospective cross-sectional study was conducted on 390 adult patients who underwent craniotomy for brain tumour resection between January 2019 and December 2023 at a single tertiary care center, Aga Khan University Hospital, Karachi. Data was collected after ERC approval from May to July 2024. Prolonged LOS was defined as hospitalization for ≥ 8 days. Demographic, clinical, radiological, operative, and postoperative variables were analyzed using univariate and multivariable logistic regression to identify independent predictors of prolonged LOS.

Results: Of the 390 patients, 58 (14.9%) had prolonged hospitalization. On univariate analysis, prolonged LOS was associated with longer SCU/ICU stay, lower Karnofsky Performance Status (KPS), lower Glasgow Coma Scale (GCS), preoperative antiplatelet/anticoagulant use, greater blood loss, longer operative duration, perioperative transfusion, and general anaesthesia. On multivariable analysis, emergency admission (OR 2.85, 95% CI 1.33–6.07), transfer from another service (OR 6.07, 95% CI 1.04–35.43), and longer operative duration independently predicted prolonged LOS, while higher preoperative KPS was protective.

Conclusion: Emergency admission, inter-service transfer, prolonged operative duration, and poor preoperative functional status were independent predictors of prolonged hospital stay after craniotomy for tumour resection.

Recommendations: Optimizing functional status, improving operative efficiency, and implementing enhanced recovery pathways may help reduce LOS and improve resource utilization.

Keywords: Craniotomy, Brain tumour, Length of hospital stay

DOI: <https://doi.org/10.47391/JPMA-7ANOS-ABS-11>

(JPMA 76:S12(Supple-1); 2026)

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