

11. IMAGISTIC METHODS IN SUPRATENTORIAL CEREBRAL TUMORS PROLONG THE SURVIVAL AMONG ADULT PATIENTS



Author: Dumitrașco Ana-Maria; **Co-author:** Croitoru Dan, Andrușca Alexandru

Scientific advisor: Andronachi Victor, MD, PhD, Associate Professor, Department of Neurosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction. Supratentorial cerebral tumors are life-threatening conditions and may lead to a variable survivability among adult patients. It was proven that the complexity of the imagistic methods along with neuronavigation is improving the survival among these patients. The size of the tumor as well as the dimension of its extension margins is not a statistically significant factor for the survival of the patients. Other factors as genetic predisposition to chemotherapy, extensive combinations of drug therapy, composite drug delivery systems, thermotherapy and radiotherapy are also of interest for prolonging the survival among these patients but the addition of imagistic studies to the mandatory investigations is of special interest for a supportive second or maybe third opinion of the same neurosurgeon along with his colleagues although the main factor for each neurosurgical clinical case is the neurosurgeon's skill.

Aim of study. To determine if an improvement in the imagistic investigations assessment is useful in supratentorial cerebral tumors clinical management.

Methods and materials. We have revised the patients that had supratentorial cerebral tumors and were admitted to the Emergency Hospital from Chisinau, Republic of Moldova. The time interval for inpatienting them was 01.01.2022-08.12.2023 and there were 63 patients. Overall there were 26 (41.27%) males and 37 (58.73%) females. Gender was not a significant factor for predicting survivability. The number of inpatient days was 11.56 ± 4.24 days for the alive group and 8.5 ± 3.33 days for the deceased group.

Results. In the study poll 12/63 (19.05%) patients had died at that time of data collection and 51/63 were still alive (80.95%). In the first group there were 11 patients who had undergone ≤ 2 imagistic investigations and 1 that had undergone 4 of them while in the second group there were 50 patients that had undergone ≥ 1 imagistic investigations and 1 of them had undergone 0. The patients that were deceased during the data collection had undergone surgical interventions only in 4 (33.33%) cases with an average number of imagistic investigations of 1.75 ± 0.375 and the alive group had 37 (72.5%) surgical interventions with an average number of imagistic investigations of 2.40 ± 0.82 . The before-mentioned raises many questions regarding the secondary factors that lead to this difference. Age was not a significant factor of survivability in the patients but had slightly increased values in the non-survival group (54.66 ± 11.22 years compared to 52.05 ± 12.52 years).

Conclusion. An increased number of imagistic investigations is prolonging the survival time of the patients with supratentorial cerebral tumors because it enhances the surgical intervention quality and makes the neurosurgeon more focused on the tumor extension without regard to the resection margins.

Keywords. Supratentorial cerebral tumor, imagistic investigation, neuronavigation