Chemotherapy Toxicities and Geriatric Syndromes in Older Patients with Malignant Gliomas

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BACKGROUND
Malignant gliomas (MG) are aggressive brain tumors including glioblastoma, anaplastic astrocytoma and anaplastic oligodendroglioma. Over 40% of MG occur in patients older than age 65, although few older adults are included in therapeutic clinical trials and the standard of care for these patients is not well defined. Typical treatment includes maximal safe resection followed by focal radiotherapy and concurrent and adjuvant chemotherapy with temozolomide.

Currently, there are no widely used or validated assessment tools for older patients with MG. Median overall survival (OS) is 10 months for these patients older than age 65, although few older adults are included in therapeutic clinical trials and the standard of care for these patients is not well defined. Typical treatment includes maximal safe resection followed by focal radiotherapy and concurrent and adjuvant chemotherapy with temozolomide.

OBJECTIVE
To describe treatment toxicities, polypharmacy and geriatric syndromes in older patients with malignant gliomas which are poorly described.

METHODS
• IRB approved retrospective study of patients with MG at the University of Rochester, Wilmot Cancer Center from January 2012–December 2018
• The electronic medical record was used to assess:
  • Patient and tumor characteristics
  • Cancer therapies
  • Treatment delays and toxicities
  • Polypharmacy
  • Geriatric syndromes
  • Acute care utilization

RESULTS
• 125 patients with MG (115 GBM, 10 AA)
• Median OS= 10.3 months, Median PFS= 5.7 months
• 96% experienced at least one hospital admission (Range: 1–3), most commonly for seizures
• 64% reported at least one fall
• 83% of patients enrolled on hospice at time of death

TREATMENT CHARACTERISTICS & TOXICITIES

POLYPHARMACY

• Patients prescribed Median of 11 medications at diagnosis
• Median OS was 8.6 months vs. 14 months for those taking < 8 vs. 8 or more medications
• 30% were prescribed a medication on Beer’s List
• Median of 5 medications added during cancer treatment
• 54% were started on an antidepressant after diagnosis

DISCUSSION
• Treatment toxicities are common, likely due to comorbidities, decreased performance status and older age
• Consideration should be given to omission of TMZ for patients with tumors with MGMT-unmethylated promoters
• Use of validated assessments such as the Comprehensive Geriatric Assessment and Geriatric-8 survey should be considered in all older patients with MG
• Polypharmacy is common, associated with decreased survival and should be mitigated when possible (eg. de-prescribing protocols)
• Education and appropriate treatment of seizures and venous thromboembolism may reduce hospitalizations

CONCLUSION
• Treatment toxicities and geriatric syndromes are common in older patients with MG and are likely underrecognized
• Tools for evaluation, longitudinal assessment and screening are needed to better identify and treat these conditions
• Clinical trials should be more inclusive of older patients or designed to specifically address the needs of this population