ABSTRACT

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Treatment of anaplastic gliomas: evidences and controversies.

Geurts M(1), Snijders TJ, van den Bent MJ.

Author information:
(1)The Brain Tumor Center at Erasmus MC Cancer Center, University Medical Center Rotterdam, Rotterdam Department of Neurology and Neurosurgery, UMC Utrecht Brain Center, University Medical Center Utrecht, Utrecht, The Netherlands.

PURPOSE OF REVIEW: Evolving molecular data have led to a new and advanced grading system of anaplastic glioma. In everyday practice, physicians have to translate evidence from old clinical trials into evidence meeting the reclassified tumor types.

RECENT FINDINGS: New biomarkers allow the identification of anaplastic glioma with relatively poor prognosis and with prognosis similar to glioblastoma. An update with molecular analysis of the phase 3 CATNON trial demonstrates the benefit of adjuvant temozolomide (TMZ) to be dependent on the mutational status of isocitrate dehydrogenase. In the ongoing debate on the optimal chemotherapy regimen, a large retrospective study suggesting a better tumor control with vincristine (PCV) as compared to TMZ is added to the evidence. The best timing for treatment of anaplastic astrocytoma also remains a matter of controversy. A recent study shows that even in selected patients with anaplastic glioma with foci of malignant tumor following (sub)total resection, postponement of medical treatment can be considered.

SUMMARY: In clinical practice, the trade-off between efficacy and (acute and long-term) toxicity of treatments needs to be re-evaluated for the newly (molecularly) defined entities. Updates from past clinical trials on anaplastic glioma with molecular analysis and subgroup analyses are needed to further guide treatment decisions.

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