

ABSTRACT NO:36
CASE REPORT**Carboplatin and Etoposide as Effective Fourth-Line Treatment in a patient with Recurrent Oligodendroglioma Complicated by Therapy-Related Acute Myeloid Leukaemia**Alyna Hafeez¹, Nabiha Saeed², Yasmin Abdul Rashid³, Adeeba Zaki⁴**Abstract**

Objective: A case of recurrent anaplastic oligodendroglioma treated with carboplatin and etoposide as fourth-line chemotherapy is presented. The efficacy of carboplatin and etoposide is highlighted as a salvage regimen and the risk of therapy-related acute myeloid leukaemia (t-AML) as a long-term complication of prolonged alkylating agent exposure.

Methods: The case report is of a 44-year-old female who initially presented in 2020 with seizures and headache. Imaging revealed a frontal lobe lesion, for which she underwent craniotomy with resection; histopathology confirmed anaplastic oligodendroglioma. Following residual disease on post-operative imaging, she received concurrent chemoradiotherapy (CCRT) with temozolomide (TMZ), followed by maintenance TMZ. On disease progression, she was sequentially treated with three further lines of therapy: bevacizumab/irinotecan, then PCV (procarbazine, lomustine, vincristine), and subsequently carboplatin and etoposide, initiated in April 2022 as fourth-line therapy, continued for a total of 40 cycles. Clinical and radiological response, as well as treatment-related toxicity, were assessed throughout the course of therapy.

Results: The patient achieved an excellent response to fourth-line carboplatin and etoposide, with a survival benefit of approximately 40 months on this regimen. Despite this favourable disease control, she subsequently developed therapy-related acute myeloid leukaemia (t-AML), a rare but recognized complication of prolonged alkylating agent exposure, and ultimately succumbed to this secondary malignancy.

Conclusion: Carboplatin and etoposide may be considered a viable salvage treatment option for heavily pretreated patients with recurrent oligodendroglioma who have progressed through multiple prior lines of therapy, offering meaningful survival benefit even in the fourth-line setting. However, this case underscores the importance of vigilant long-term monitoring for serious late toxicities, particularly Acute Myeloid Leukaemia.

Keywords: Oligodendroglioma; Recurrent glioma; Therapy-related acute myeloid leukaemia

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