Bevacizumab for recurrent glioblastoma case reports

A case of a 43-year-old female with recurrent glioblastoma who has received treatment from three clinical trials, including a re-challenge with super selective intra-arterial cerebral infusion (SIACI) of bevacizumab. First, she enrolled into a phase I/II trial for patients newly diagnosed with glioblastoma (BLINDED FOR REVIEW) and received three doses of SIACI bevacizumab over 180 days in addition to standard of care chemotherapy and radiation. Following progression indicated on her MRI, she consented for a separate clinical trial for her disease and received two cycles of temozolomide with an investigational agent. The patient was removed from the study upon tumor progression. Subsequently, she was rechallenged with SIACI of bevacizumab via a third clinical trial (BLINDED FOR REVIEW) and then completed three intravenous infusions. After completing the third trial, her MRI demonstrated improvement based on RANO criteria.

This is the first report to highlight the effect of rechallenging a patient with SIACI of bevacizumab following disease progression after initial bevacizumab treatment and subsequent alternate clinical trial failure. There is a need to conduct further clinical trials to evaluate the benefits of rechallenge with SIACI versus IV bevacizumab for GBM, further exploring theories of bevacizumab resistance¹⁾.

A 31 year-old man diagnosed with GBM, following primary resection, received temozolomide. After a second resection, he received one dose of IA bevacizumab with BBBD using mannitol, preventing regrowth for 2.5 years. Following tumor regrowth, the patient received another dose of IA bevacizumab with BBBD, which has prevented regrowth for another year ².

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