Intraventricular immunovirotherapy: A translational step forward

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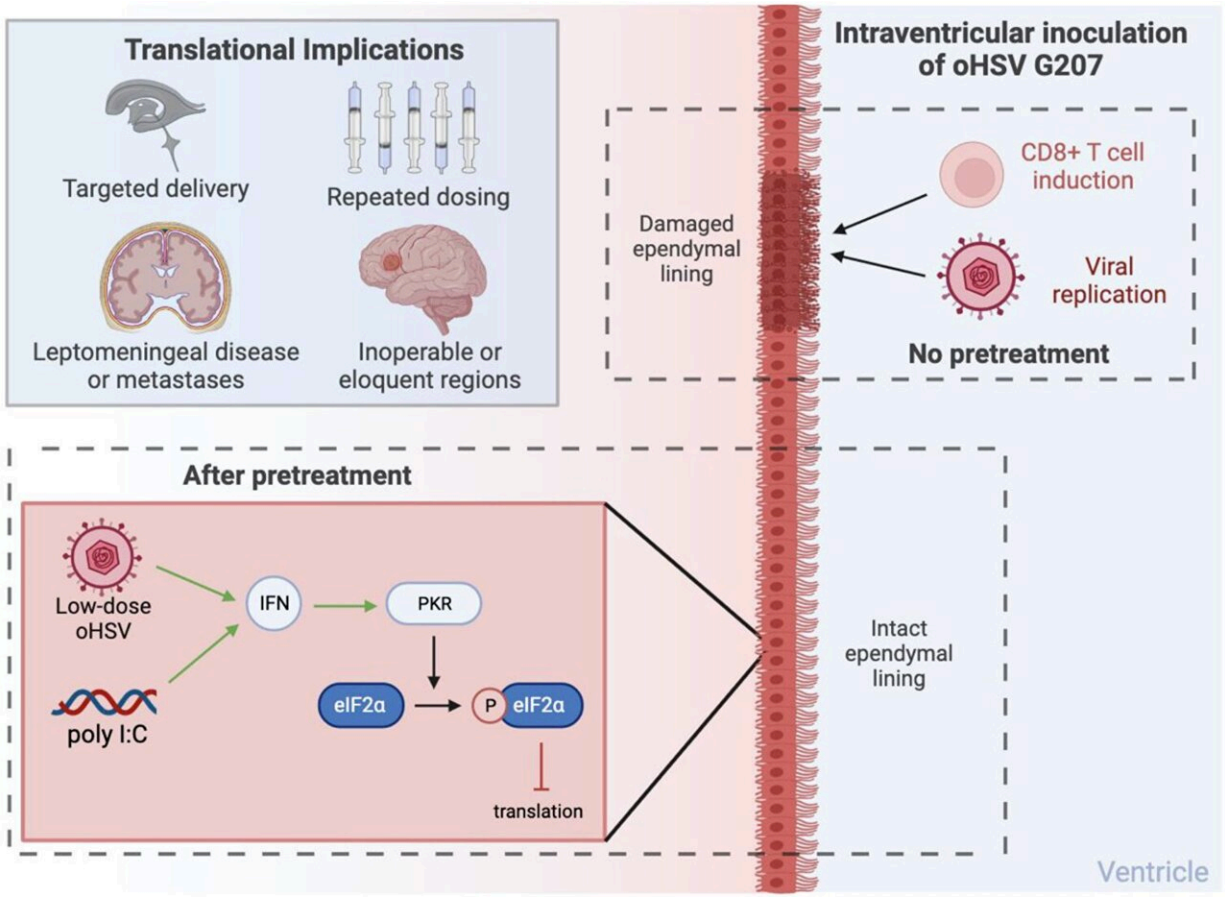

Putative mechanisms of toxicity. Credit: *Oncotarget* (2023). DOI: 10.18632/oncotarget.28343

A new research perspective titled "Intraventricular immunovirotherapy;

a translational step forward" has been published in *Oncotarget*.

In this new perspective, researchers from Harvard Medical School, Massachusetts Institute of Technology and University of Alabama at Birmingham discuss oncolytic virotherapy with intratumoral engineered type-1 herpes simplex virus (HSV). Intraventricular therapy (IVT) has been proven safe with promising efficacy in recent clinical trials for treatment of both pediatric and adult high-grade glioma.

The researchers write, "Oncolytic herpes simplex virus type-1 (oHSV) has shown promise in clinical trials in both pediatric and adult brain tumors."

However, this approach excludes patients with tumors in surgically inaccessible and/or eloquent brain regions. Current delivery methods are also unable to access/treat those patients with metastatic disease in the spinal cord and/or leptomeningeal disease.

A recent preclinical study has paved the way for clinical translation of intraventricular administration of oHSV by identifying and mitigating the toxicity associated with this route for therapeutic benefit in murine models of disseminated medulloblastoma. This work may ultimately allow for targeting of intractable disease and provides a feasible option for the repetitive dosing of clinically relevant immunovirotherapy, G207.

"Overall, demonstrating the safety and efficacy of IVT with G207 is a significant step towards expanding the capabilities of oHSV, paving the way for new clinical trials, and increasing the potential of an already promising therapy," the researchers conclude.

More information: Joshua D. Bernstock et al, Intraventricular immunovirotherapy; a translational step forward, *Oncotarget* (2023). DOI: 10.18632/oncotarget.28343