Could genetically modified polio virus treat brain tumors?

A genetically modified polio virus improved the longer-term survival of patients with a lethal type of brain tumor, according to the results of an early-stage clinical trial published [June 26].

Twenty-one percent of the patients treated with the virus — all with disease that had recurred — were alive after three years, compared with just 4 percent of those who had undergone standard chemotherapy.

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Glioblastoma, a difficult-to-treat disease that is the most common of all malignant brain tumors, can cause seizures, headaches, blurred vision and confusion. Even with aggressive treatment, people who are newly diagnosed typically survive less than 20 months, while those with a recurrence usually die within a year.

Duke researchers opened the Phase 1 trial in 2012 to test the safety of the modified-virus treatment and try to determine the right dose. After surgeons implanted a catheter in each patient's brain, a small amount of a genetically modified form of the polio virus was infused directly into the tumor. The virus is designed to target the tumor cells and trigger a response by the immune system.

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The polio treatment is one of several "oncolytic viruses" being investigated as anti-cancer agents. While researchers have long viewed such viruses as potential tools for directly killing cancer, they now suspect that the viruses might be more effective at marshaling the body's immune system against malignancies.

Read full, original post: Polio virus treatment increased survival in patients with deadly brain tumors, study shows