Stem cells show early promise for rare brain disorder

Four young boys with a rare, fatal brain condition have made it through a dangerous ordeal. Scientists have safely transplanted human neural stem cells into their brains. Twelve months after the surgeries, the boys have more myelin — a fatty insulating protein that coats nerve fibers and speeds up electric signals between neurons — and show improved brain function, a new study in Science Translational Medicine reports. The preliminary trial paves the way for future research into potential stem cell treatments for the disorder, which overlaps with more common diseases such as Parkinson's disease and multiple sclerosis.

"This is very exciting," says Douglas Fields, a neuroscientist at the National Institutes of Health in Bethesda, Maryland, who was not involved in the work. "From these early studies one sees the promise of cell transplant therapy in overcoming disease and relieving suffering."

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