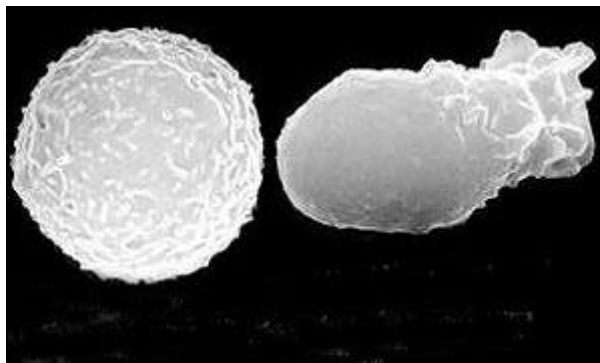


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Cell transplant treats Parkinson's



Cells were re-injected into the brain



A transplant of cells from his own brain has helped to treat a man who has Parkinson's disease, say researchers.

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Scientists say the procedure led to a reduction in the trembling and rigid muscles associated with Parkinson's.

More than two years after the experimental treatment, the man has no symptoms of the degenerative brain condition.



This is the first case that shows a promising technique may work



Dr Michel Levesque

However, the claims have been met with scepticism by UK experts.

The scientists isolated adult stem cells from the patient's brain, nurtured them in the lab, and then re-injected them to restore normal function.

Stem cells are the body's so-called master cells that have the ability to develop into a range of different tissues.

Researcher Dr Michel Levesque, of the Cedars-Sinai Medical Center in Los Angeles, said: "This is the first case that shows a promising technique may work.

"It is an experimental procedure and has to be investigated further before it becomes accepted procedure."

Key chemical

Parkinson's is caused when brain cells that produce a chemical called dopamine die off. Dopamine plays a key role in co-ordinating

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Internet links:

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European Parkinson's Disease Association
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body movement.

The patient developed Parkinson's in his 40s. He had tremors and stiffness in his muscles and the drugs used to treat the disease had, as they always do, stopped working.

His team drilled into the patient's skull and removed a piece of his brain measuring less than the size of a pea.

“
Most people feel that we are a long way from the clinic with this type of research
”

They then extracted stem cells, and grew them in a special solution.

Parkinson's Disease Society

Tests showed that at least some of the cells were producing dopamine.

The cells were then injected back into the brain.

Scans taken three months after the transplant showed that dopamine had increased by 58%.

Dopamine production subsequently dipped, but the symptoms of Parkinson's have not returned.

Dr Levesque said it was possible that the symptoms would only reappear some time after dopamine production dies down.

Alternatively, the scans might not show everything that is going on in the brain, or other cells might also be involved in the processes that underlie Parkinson's.

Dr Levesque's team plan to carry out further trials on more patients.

Sceptical response

A spokesman for the UK Parkinson's Disease Society said much work had been to examine the use of adult stem cells to treat the condition.

He said that it had previously proved difficult to generate sufficient numbers of cells, and to get them to turn into proper dopamine producers.

He said the failure of the US researchers to show long-lasting evidence of the survival of dopamine-producing cells following the transplants, and the lack of peer-reviewed scientific data made him sceptical about the claims.

He said: "Certainly most people feel that we are a long way from the clinic with this type of research and that their premature use may adversely prejudice the field.

"One has to ask the question as why adult stem cells in the Parkinson's brain do not normally replace those lost in the disease process."

Details of the research were presented at a meeting of the American Association of Neurological Surgeons in Chicago.

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