

New Hope for Victims of Parkinson's Disease

Mexican doctors perform transplants from suprarenal gland to the brain

Samuel Rosales Ceniceros, 55, suffered from uncontrollable shaking in several parts of his body. For eleven years he had been unable to write his name or draw a line or a circle. Mr. Rosales had Parkinson's disease. His doctors offered him a possible hope: a cerebral gland transplant. Thirty-three days after the operation, Mr. Rosales was able to draw and write. Mrs. Maria Antonieta Silva, 51, had suffered from the same disease for over twelve years. She had serious difficulty walking and talking. Six days after the gland transplant, she could respond to her doctor's instructions and raise her legs without any signs of Parkinson's disease symptoms.

These two cases represent the most important breakthrough in years in the treatment of Parkinson's disease, a progressive degeneration of the nervous system affecting mainly the elderly, and whose characteristic symptom is uncontrollable trembling in parts of the body. Sufferers from the disease are incapable of carrying out a number of ordinary, everyday activities. Some cannot even walk without assistance. Almost all have trouble writing or speaking. Sufferers' faces are generally expressionless. Drugs such as Cinemet can control the shaking, enabling sufferers to perform some of their normal activities; but after a time these medicines become ineffectual. In advanced

stages of the disease, patients become total invalids.

Parkinson's disease is caused by lack of Dopamine, a chemical substance found in the brain which has the

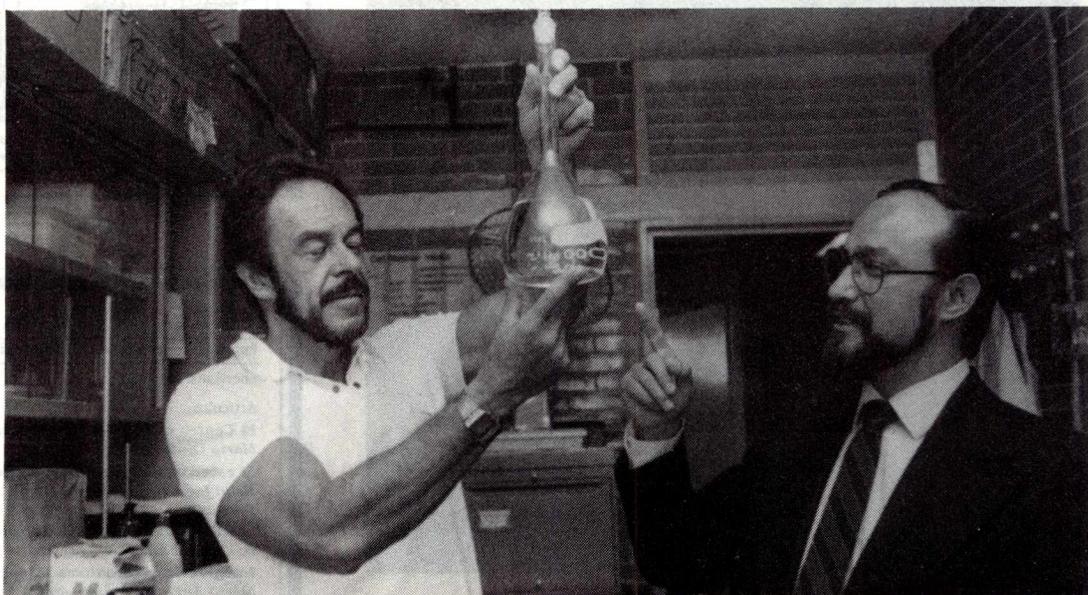
function of sending messages between neurons. The fact that Dopamine is also produced in the suprarenal glands has inspired researchers seeking a cure for Parkinson's disease. Animal experiments had already shown that the nervous system is capable of accepting transplants from other organs to regenerate some of its functions.

The first suprarenal gland transplants to the human brain were performed in Sweden in 1982. The results, however, were negative: after a short period of improvement, the patients' condition

deteriorated once again. Success has, however, crowned the more recent efforts of a Mexican team led by Drs. Ignacio Madrazo (Head of the Neurosurgery Department of the La Raza Specialist Hospital) and René Drucker Colín (Head of the Neurosciences Department of the Cell Physiology Institute at the National Autonomous University).

The Mexican specialists technique consists in the introduction of the medulla of the suprarenal gland into the caudate nucleus, situated in the cerebral ventricle cavity. The caudate nucleus is surrounded by the cerebrospinal

In advanced stages of the disease, patients become total invalids



Checking Dopamine.

Photo by Sergio Dorantes

Pioneering doctors receive award for their work from the Mexican President

On May 19 this year, President Miguel de la Madrid awarded Drs. Ignacio Madrazo and René Drucker a medal of recognition for their work on Parkinson's disease. Also present on the occasion of the award were Ricardo García Sáiz, Director of the Mexican Social Welfare Institute (IMSS), and Jorge Carpizo, Rector of the National Autonomous University (UNAM).

Madrazo and Drucker presented the President with a brief account of their experiments and extended their thanks to the IMSS and the UNAM for

providing facilities that made possible this important medical breakthrough. The IMSS and UNAM representatives gave assurances of their continued support for future research on the disease.

De la Madrid expressed the satisfaction felt by government and public for the successful results of the transplant experiments, which, he said, had placed Mexican medical science in a "foremost position in the world."

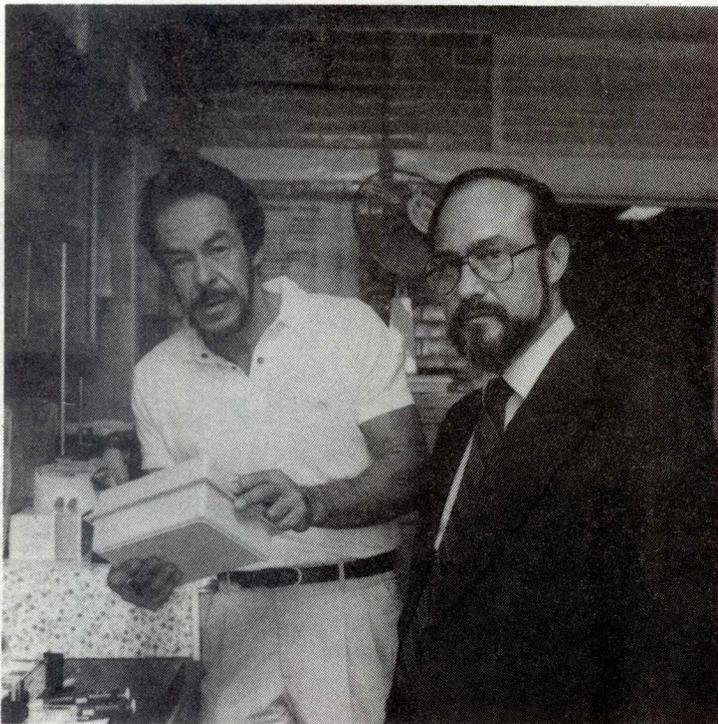
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fluid, which provides the transplanted tissue with the nutrients necessary for its conservation. The key to the Mexican success probably lies in the direct relation between the transplanted medulla and the cerebrospinal fluid. The operation is carried out in two stages: first, a team of urologists extract the gland, and then another team performs the transplant to the brain. The success of the new tech-

plains that for the first few days after the operation, the transplanted medulla produces unusually high levels of Dopamine, causing trembling and body stiffness to disappear completely. Dopamine production drops to a more normal level, however, as the medulla adapts to its new environment, resulting in the reappearance of slight trembling in certain parts of the body. But

The new technique opens the way for transplants from other parts of the body to the brain



Doctors Ignacio Madrazo and Drucker Colín.

nique opens the way for transplants to the brain of organs from other parts of the body, thus offering hope for people with other neurological disorders.

Mr. Rosales and Mrs. Silva are two of ten patients who have undergone the operation. To date, their recovery has been satisfactory. Muscular stiffness has practically disappeared; trembling in fingers and legs is so slight as to be almost unnoticeable. Mrs. Silva can now speak clearly, and her daily dose of Cinemet has dropped from over seven lb. to 1.5 oz. Dr. Madrazo ex-

even this, in Dr. Madrazo's estimation, will stop in time.

Mr. Rosales and Mrs. Silva are still under observation and are expected to achieve complete recovery in two or three years. In that period, the Drucker-Madrazo team hope to carry out nine further gland transplant operations, with the aim of acquiring the experience necessary to consolidate this important breakthrough in medical science.★

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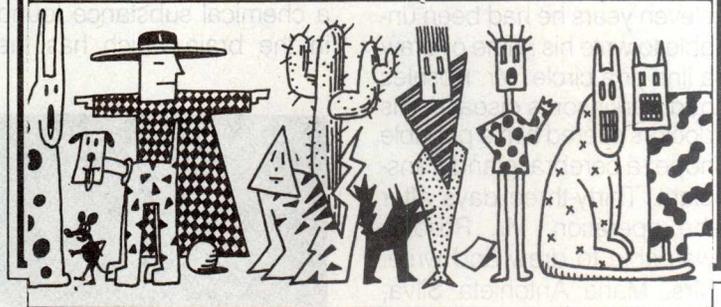
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