We are grateful to Yusuke Sumiki, Saburo Funahashi, and Takashi Kubota for their advice.

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References and Notes

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12 July 1954.

Chemopallidectomy: An Investigative Technique in Geriatric Parkinsonians

In March 1954 I described a simple technique of intracerebral procaine injection in the region of the globus pallidus in hyperkinetic disorders. This technique permits one to place a small caliber cannula or catheter into the brain through a trephine opening *without* the use of a stereotaxic instrument. Then, by injections of small amounts of procaine, one can locate that intracerebral area, the procainization of which will temporarily relieve parkinsonian tremor and rigidity, in the contralateral extremities, without causing motor weakness. It was suggested at that time that this technique might be used to locate a physiologic landmark, the permanent destruction of which would provide longer lasting relief of tremor and rigidity. The purpose of this communication is to report an investigative effort in that direction.

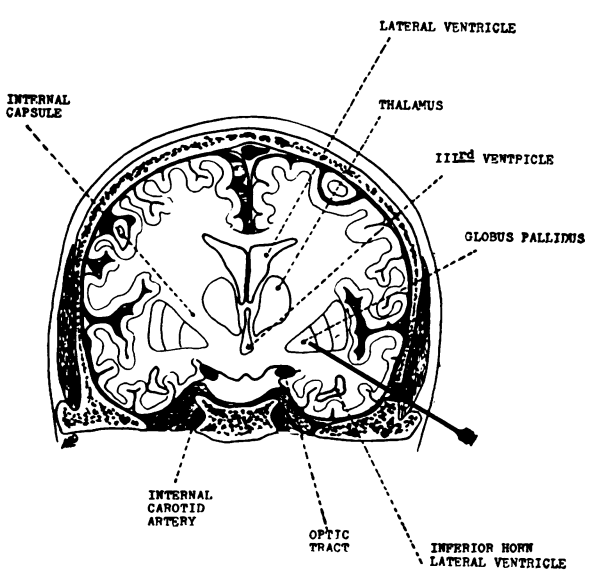

Fig. 1. Cross section of the brain demonstrating the route by which a polyethylene catheter is introduced transcerebrally into the region of the globus pallidus.

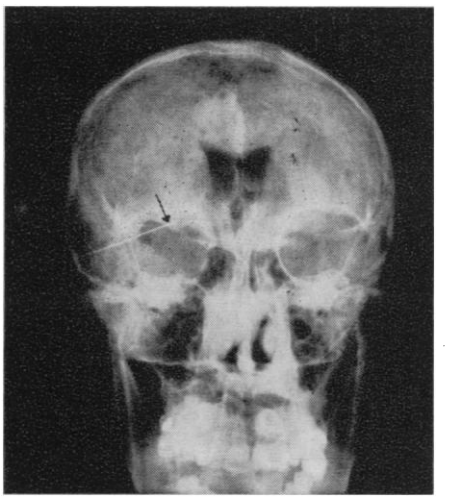

Fig. 2. Roentgenogram which was made during chemopallidectomy. Note air in the lateral ventricles and third ventricle. A tantalum stylet which lies within the polyethylene catheter denotes the position of this instrument. Compare with Fig. 1. Injection of procaine through the polyethylene catheter in this case alleviated contralateral tremor and rigidity. Subsequent injection of absolute alcohol produced alleviation of tremor and rigidity persisting for several months and up to the time of this report.

Using essentially the technique described earlier (*1*), a small polyethylene catheter with a tantalum stylet is introduced into the brain in the region of the globus pallidus (Fig. 1). Roentgenographic confirmation of the position of the catheter is obtained (Fig. 2). Procaine is injected in increments of 0.25 ml or less, at 5-min intervals, with minor corrections of catheter placement when necessary, until contralateral tremor and rigidity have been relieved. This relief of tremor and rigidity indicates that the "physiologic landmark" has been reached. The catheter is secured so that it remains at this depth and roentgenographic documentation is again obtained. One milliliter of absolute alcohol is then introduced into this area in increments of 0.07 ml every 30 sec. The catheter is left in place for 48 or 72 hr so that the neurolytic lesion can be enlarged if tremor or rigidity recur during this time. Roentgenographic verification of the position of the catheter is obtained before reinjection is carried out.

This technique is currently being investigated in patients older than 55 yr who are considered too old for the operation of anterior choroidal artery occlusion (*2, 3*). No mortality or lasting motor weakness has yet been encountered with this technique. Of five cases followed for 6 mo or longer, two had recurrence of symptoms in less than 3 mo; three subsequent patients have demonstrated relief of tremor or rigidity or both for 6 mo or more following this procedure.

On the basis of this preliminary experience it seems to be worth while to bring this investigative technique to attention.

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Association Affairs

International Arid Lands Meetings in New Mexico

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A major effort to advance international cooperation of scientists from many fields in study of the future of arid lands will be made in New Mexico this spring. The American Association for the Advancement of Science is sponsoring an *International Arid Lands Symposium and Conference* in three parts. The symposium will be held at the University of New Mexico in Albuquerque on 26–29 April, a field trip in the Rio Grande Valley between Albuquerque and El Paso will take place on 30 April and 1 May, and a conference for a smaller group will be held at the New Mexico Institute of Mining and Technology in Socorro on 2–4 May.

The idea for such a gathering came from the Committee on Desert and Arid Zone Research of the Southwestern and Rocky Mountain Division of the association. It was approved last summer by the national AAAS board of directors which then sought support for carrying out the project. Helpful grants toward the cost of the symposium and conference since then have been received from the National Science Foundation and the Rockefeller Foundation. UNESCO has granted funds toward the cost of travel of foreign participants and has convened a meeting of its Advisory Committee on Arid Zone Research in the same region at that time so that members of the committee may take part.

Discussions planned for the symposium and conference will build upon several international arid zone gatherings of the past 5 years. A broad view of desert problems was developed at the Israel conference in 1952 [*Desert Research,* Research Council of Israel Special Publication No. 2 (1953)]. Hydrologic questions received primary attention at the Ankara symposium [*Proceedings of the Ankara Symposium on Arid Zone Hydrology,* UNESCO (1953)]. Biologic aspects of deserts, both hot and cold, were considered at London [*Proceedings of the Symposium on the Biology and Productivity of Hot and Cold Deserts,* Institute of Biology (1954)]. Plant ecology was the central interest of the Montpellier Symposium in 1953 [report now in press]. Solar energy and wind power were the major topics in the symposium held at New Delhi last autumn [F. Daniels, *Science* **121**, 121 (28 Jan. 1955)].

The New Mexico meetings will differ from the previous ones in several important ways. They will concentrate attention on the frontiers of knowledge over a wide range of interrelated fields. There will be a small number of papers—all invited—and substantial time for discussion following them. Scientists from different fields will address themselves to the same problem. The final day of the symposium will be devoted to discussion in small groups dealing with problems that cut across several disciplines. Since the conference must be limited in numbers so as to promote fruitful exchange of ideas, participation will be by invitation only. The participants will focus attention on a few lines of investigation that seem, in the light of the symposium, to promise benefits from international or interdisciplinary collaboration. Rather than summarize the results of past work, the discussion will, it is hoped, concentrate on new directions for research.

The future utility of the resource base for large segments of the arid zone around the world is far from secure. If their occupancy is to be maintained or extended, the exchange and application of present information must be accelerated and new understandings must be won. The fact that the meetings will be held in a region whose future seems closely linked with the solution of troublesome questions of salinity, silting, and land use should add weight to this emphasis.

See advertising pages of this issue for registration and housing information. For copies of the program or other information, write American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW., Washington 25, D.C., U.S.A. Cable: Advancesci Washington.

It is estimated that scientists from more than 25 countries will take part. The range of the problems to be considered and of the experience of those invited to give papers is shown in the following preliminary program.