

## Radioactive Chromic Phosphate in Cystic Brain Tumors

Marvin C. Overton, III, M.D.

*Galveston, Texas*

In 1963 Overton and Sheffel (2) reported, in the *Journal of Neurosurgery*, a patient with cystic Craniopharyngioma who had been treated by injection of radioactive chromic phosphate ( $^{32}\text{Cr PO}_4$ ) into a recurrent cyst and had remained symptom free for 26 months. Regrettable in this report was the oversight of earlier reports by Spiegel and Wycis (1, 4) of the use of radioactive chromic phosphate in similar patients.

Since publication of these reports, one of their earlier patients, as well as our patient, have come to reexploration thus providing opportunity for visual inspection of the areas previously injected.

Drs. Spiegel and Wycis' patient remains well over ten years with a Craniopharyngioma after their first injection of chromic phosphate (5). Their second patient, who harbored a pituitary adenoma, was reoperated on account of failing vision fifteen months following injection. Secondary craniotomy "failed to reveal any gross lesion around the optic nerves or chiasm. The pituitary fossa was empty and no gland or tumor was visible (3)." Although the patient was asymptomatic four years later, visual loss progressed to blindness in one eye.

Our patient developed increased visual difficulty 33 months following injection of the Craniopharyngioma cyst. Efforts to aspirate further cyst fluid were unsuccessful and at craniotomy a suprasellar mass consisting chiefly of solid tumor was found although there was a two centimeter cyst lying above the chiasm. It was believed that the previously cystic portion of the tumor had been destroyed by the injection of radioactive chromic phosphate and that the solid portion and the small cyst found at reoperation represented growth in a new part of the tumor.

The presumption that the original pituitary adenoma in the patient of Spiegel and Wycis was destroyed by the radioactive material, appears confirmed by their surgical note. Failure to find evidence of the previously huge cyst which we had injected with radioactive chromic phosphate seems to indicate that this cyst had also been destroyed.

These findings would appear to provide justification for the further use of radioactive chromic phosphate in certain cystic tumors when surgery alone would be ineffective.

#### REFERENCES

1. MURTAGH, F., WYCIS, H. T., ROBBINS, R., SPIEGEL—ADOLH, M., AND SPIEGEL, E. A.: Visualization and Treatment of Cystic Brain Tumors by Stereo-Encephalography. *Acta Radiol.* 46:407-414, 1956.
2. OVERTON, M. C. AND SHEFFEL, D. D.: Recurrent Cystic Formation in Craniopharyngioma Treated With Radioactive Chromic Phosphate. *J. Neurosurg.* 20:707-710, 1963.
3. SPIEGEL, E. A., AND WYCIS, H. T.: Stereoencephalotomy, Part II, New York: Grune and Stratton, p. 481-494, 1962.
4. WYCIS, H. T., ROBBINS, R., SPIEGEL—ADOLH, M., MESZAROS, J., AND SPIEGEL, E. A.: Treatment of a Cystic Craniopharyngioma by Injection of Radioactive P<sup>32</sup>. *Conf. Neurol.* 14:193-202, 1954.
5. WYCIS, H. T.: Personal communication, September 9, 1964.

### Announcement to Authors Preliminary Notes

Space will be reserved in each issue of THE JOURNAL OF NUCLEAR MEDICINE for the publication of one preliminary note concerning new original work that is an important contribution in Nuclear Medicine.

Selection of the preliminary note shall be on a competitive basis for each issue. One will be selected after careful screening and review by the Editors. Those not selected will be returned immediately to the authors without criticism. Authors may resubmit a rejected or revised preliminary note for consideration for publication in a later issue. The subject material of all rejected manuscripts will be considered confidential.

The text of the manuscript should not exceed 1200 words. Either two illustrations, two tables, or one illustration and one table will be permitted. An additional 400 words of text may be submitted if no tables or illustrations are required. Only the minimum number of references should be cited.

Manuscripts should be mailed to the Editor, Dr. George E. Thoma, St. Louis University Medical Center, 1402 South Grand Blvd., St. Louis, Missouri 63104. They must be received before the first day of the month preceding the publication month of the next issue, *e.g.*, preliminary notes to be considered for the October 1967 issue must be in the hands of the Editor before September 1, 1967.