THE ANGIOGRAPHIC DIAGNOSIS OF SPONTANEOUS THROMBOSIS OF THE INTERNAL AND COMMON CAROTID ARTERIES*

HERBERT C. JOHNSON, M.D., AND A. EARL WALKER, M.D.

Division of Neurological Surgery, The Johns Hopkins University School of Medicine,
Baltimore, Maryland

(Received for publication June 12, 1951)

During the past three years, it has been our practice to perform cerebral angiography on almost all patients suspected of having a brain tumor, aneurysm, or cerebral vascular anomaly. In the course of approximately 500 angiograms, we have had a group of cases in which brain tumor or aneurysm was suspected and in which it has been possible to make a positive diagnosis of spontaneous thrombosis of the internal carotid artery.

In 1936, Sjöqvist reported a case in which there appeared in angiograms to be an occlusion of the internal carotid artery just above the carotid siphon; a presumptive diagnosis of a thrombosed aneurysm of the carotid was made. Attention was drawn to the angiographic diagnosis of spontaneous thrombosis of the internal carotid artery by Moniz, who in 1937 described 4 such cases out of a series of 537 patients on whom angiography was done. We have been able to find in the literature a total of 101 cases of thrombosis of the internal or common carotid artery diagnosed by means of angiography. This includes only those cases in which an angiogram was made or in which the carotid was exposed with the intention of performing angiography. It also includes only those that are considered as spontaneous thrombosis. It is interesting that of these 101 cases, 84 have been in the European literature and only 17 in the American literature. This is probably a reflection of the fact that, in the past, cerebral angiography has been much more widely used in the European countries. Because of the few American reports, we are presenting our 6 cases and a review of all reported cases.

Case 1. J.H.H. No. 431638. A.C., a 39-year-old white male, was admitted on May 29, 1949. Approximately 2 months previously, suddenly one day he became momentarily confused, had difficulty in understanding what was said to him, and experienced a sensation of numbness over the right side of the body. For about a week before admission he was drowsy and had noticed a progressive weakness in his right arm and leg. On the morning of admission, while sitting on a sofa, he suddenly stopped talking and fell to the floor. He did not lose consciousness and had no convulsive movements, but his right hemiparesis was much more pronounced.

* Presented before the Harvey Cushing Society, April 26, 1951, Hollywood, Florida.
Examination. The patient was conscious but markedly aphasic, being unable to understand what was said to him and unable to speak. He had a marked right hemiparesis with diminished tendon reflexes and a Babinski response on the right. A satisfactory sensory examination could not be done because of his aphasia. B.P. was 120/70.

Blood and urine were normal. Serologic test on blood was negative for syphilis. Roentgenograms of skull and chest were normal. An EEG was reported by Dr. C. Marshall as having left-sided slowing with absence of the alpha rhythm. CSF pressure was 180 mm. of fluid; the dynamics were normal. The fluid contained a protein of 28 mg. per cent; Wassermann reaction was negative. A pneumoencephalogram was normal.

Angiography. On June 7, 1949, percutaneous left carotid arteriography was performed. Only the external carotid circulation was visualized. On June 13, 1949, arteriography was repeated and again there was filling of only the external carotid artery. The common carotid artery in the neck was outlined but only a nubbin of the internal carotid was visualized above the bifurcation (Fig. 1).

Course. The patient improved very slowly and was discharged on July 22, 1949.