VIII. RESPIRATORY ARREST AND CIRCULATORY ARREST

In 4 cases (2, 4, 14, 18) there was spontaneous respiration during the angiography. In three of them the respiration was fairly normal (2, 4, 14) but in case 18 there was typical Cheyne-Stokes respiration. In cases 2 and 4 arrest of circulation in the internal carotid artery was observed. Vertebral angiography was not performed. In case 14 there was arrest of carotid circulation but in the vertebral angiogram a nearly normal filling was obtained. Cerebral circulation time could not be estimated because only antero-posterior views were obtained. In case 18 normal filling was observed both in carotid and vertebral angiography but the circulation was extremely slow.

Respiratory arrest had occurred in 21 cases before angiography. In two of them (12, 13) normal filling of the intracranial branches of the internal carotid artery and in case 12 also of the vertebral basilar arterial system was observed. Case 12 was a 71-year-old woman with marked arteriosclerotic changes in the basal cerebral arteries. Case 13 was a 6-year old girl with a large craniopharyngeoma and acute tentorial herniation, who recovered spontaneous breathing for some time after the angiography.

Vertebral angiography was performed in 15 of the cases with respiratory arrest. In 9 of these (3, 5, 11, 15, 17, 22, 23, 24, 25) a typical arrest of the contrast medium was observed at the level of the atlanto-occipital border. In three cases normal filling of the vertebral-basilar arterial system was obtained (9, 12, 20). In three cases (10, 16, 19) a partial filling of these arteries was obtained.

It must be stated, however, that in every case with normal filling of the intracranial branches of internal carotid or vertebral arteries, the cerebral circulation was extremely slow, so that the contrast medium was still observed in the intracranial vessels after 45 seconds.