

*Cerebral pan-angiography.*

Cerebral pan-angiography is the designation we suggest for the visualization of the whole vascular bed of the brain by the contrast medium injected in one single artery.

We have already published an article dealing with spontaneous filling of the vertebro-basilar system in a number of cases of carotid-angiography (Arq. Neuro-Psiquiat., 15:97-154, junho, 1957). Studying the mechanism of this phenomenon we found many evidences that it could be explained by a sudden and marked drop in blood tension and blood flow due to a reflex elicited in a hypersensitive carotid sinus. So it was our feeling that cerebral pan-angiography might be liable to be accomplished by lowering patients blood pressure during the injection of the opaque substance.

Reduction of the blood tension by means of ganglioplegic agents has failed to give satisfactory results because the effects of these drugs are not strictly proportional to the dosis in every case; there is interference of individual factors so that increasing of the amount of hypotensive drugs may be very dangerous in many instances. In order to avoid unpleasant accidents this method was discarded.

The blood stream blocking by means of intrathoracic hyperpressure, as described by Boerema and Blickmann<sup>1</sup>, has seemed to us to be the method of choice for the task we had in mind. When the intrathoracic pressure reaches the range of about 60 cm of water, the blood tension falls to a very low level and pulsating of the arteries disappears. Injection of 15 ml of 35% Nosylan soon after the arterial pulse has been discontinued is proving quite satisfactory; the intracranial branches of both carotid and vertebro-basilar systems have been visualized in every patient of our still restrict series of (20) cases. In most of them the internal carotid of the opposite side and even the vertebral arteries are also contrast filled (fig. 1).

As soon as intrathoracic pressure is released the contrast medium leaves the arteries, then following the normal stream of cerebral circulation. We have not yet detailed data concerning the so-called venous phase of pan-

angiography. For such a purpose rapid serial equipment which is not yet available in our service is required.

Although this is a preliminary report based on a small amount of cases we believe that cerebral pan-angiography is a harmless and secure method and it may be employed in every patient in which examination of both carotid fields and the arteries of the vertebro-basilar system is required as for instance when intracranial aneurysms are suspected.

#### REFERÊNCIAS

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