

The light from the lamp is transmitted to target artery and reflected pulsatile light is guided by fiberscope to Photoelectric-transducer (CdSe), and this pulsating signal and artifact by respiration, handling the needle, etc., are amplified and data are processed to discriminate the signal and noise. This discrimination mechanism is logical filter for the recognition of pulsatile wave which is driven by the ECG and other physiological phenomena synchronized with cardiac beat. The Guidance transducer is enclosed in an injection needle (outer diameter 1.4 mm) and the inner guide is pulled out after it is inserted into the artery, and the contrast medium injected is connected with the external needle.

By using adult dogs for experiment, when the needle approach to the artery, the intensity of the reflecting light increases and is inversely proportional to the 4th power of the distance with sharp sensitivity. The location of the needle and fiberscope in pointing the direction makes it easy nearing the artery. When the tip of the needle comes closer to the artery, the amplitude increases markedly. When it is punctured into the artery, the wave form of the sphygmogram reverses and becomes markedly large, so the puncture is confirmed.

In order to recognize the sphygmogram clearly, the improvement of the logical pattern filter, and the development of the display system of using auditory senses is under investigation.

121. EEG Study during and after Cerebral Angiography upon the Cases of Cerebrovascular Accident

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There are many studies regarding EEG during cerebral angiography. However the study of post-cerebrovascular accident has not done in the past years. We have studied EEG changes throughout the cerebral angiography and following 10 to 15 minutes after angiography. 10 cc of Urographin or Conrey were used injecting into the common carotid artery, under the non-anesthetized condition. 5 cases without cerebrovascular accident were studied as control and no EEG abnormality was seen during and after cerebral angiography. 48 of post-cerebro-

vascular accident were investigated and 16 cases out of 48 cases (33%) had EEG abnormality. The abnormality was divided into 3 types: 1) Changes of background activity, 2) Increased or new focal abnormality, 3) New non-focal abnormality.

122. A Radiopaque Coin-like Fleck of the Skull

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We have experienced unusual 2 cases of radiopaque coin-like fleck of the skull following head injury by chance.

Case 1: 32 years old man, sailor. He was bruised on the head as a result of fainting. Roentgenologically a white round fleck was found at the parieto-occipital region in lateral view, but not illustrated in sagittal view. It was revealed to be skull lesion by tomograms. Operation was carried out. Specimen was unique, that is, it is radiopaque but it passed the day light. Not only histologically there were thickening of inner and outer tables and widening of the diploe, but no replacement of osseous or connective tissue, such as fibrous dysplasia. What is a radiopaque round fleck in this case? Most probably it seems to be fatty tissue in the diploe, received some idiopathic changes.

Case 2: 26 years old man, policeman. He had a blow on the head during a judo training. A radiopaque round fleck was found by skull roentgenogram, and in tangential view and tomogram, it was revealed to be situated in skull itself. Histologically, it was osteosclerosis of the parietal bone, and revealed that, skull was increased density of osseous structure. Most of the benign osteoma occurs in the frontal and ethmoid sinus, but is rare in parietal bone. In this case, it seems that, traumatic hematoma of the diploe had gradually disappeared, and filled with osseous structure.