Egas Moniz

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Fig. 1: Portugal, 1974 Birth Centenary of Professor Igaz Moniz
a. Igaz Moniz; b. Nobel Medicine and Physiology prize medal; c. Cerebral angiograph

Fig. 2: Portugal, 1983
Igaz Moniz

Fig. 3: Portugal, 1999
125th Birth Anniv. of Igaz Moniz

Egas Moniz, was a Portugese neurologist who is considered the father of modern psycho-surgery, is chiefly remembered as the originator of lobotomy and for the discovery of cerebral angiography. In 1949 he shared the Nobel Prize for Physiology or Medicine with Walter Rudolf Hess, Switzerland (1881-1973).

Cerebral Angiography: To visualise the intracranial tumours “still new technique of X-raying” was being used which involved injection of air into brain cavities. This technique was developed by the American neurosurgeon Walter Edward Dandy (1886-1946). To seek more exact as well as a less hazardous technique, Egas Moniz began a series of cadaver experiments in which he injected various radio-opaque solutions, most references are to sodium iodide, into the brain’s arteries. After mapping the normal distribution of the intracranial blood vessels, he introduced his method clinically in 1927, outlining with X rays the location and size of a patient’s brain tumour by the tumour’s displacement of injected arteries.

Egas Moniz and his colleagues published over 200 papers and monographs on normal and abnormal cerebral angiography, and the technique has been refined and elaborated for the localisation of tumours and vascular disorders throughout the body.

Prefrontal leucotomy - lobotomy: In 1935, at the Second International Neurological Congress in London, Egas Moniz heard the physiologist John Farquhar Fulton (1899-1960) and the animal physiologist Carlyle Jacobson discuss the effects of frontal leucotomy (surgical division of the nerves connecting the frontal lobes to the rest of the brain) on the behaviour of two chimpanzees: the animals remained friendly, alert, and intelligent but were no longer subject to temper tantrums or other symptoms of the experimental neuroses that had been successfully induced prior to surgery.

Egas Moniz reasoned that, severing the nerve fibres between the frontal lobes, known to be closely associated with psychological responses, and the thalamus, might force a transformation of existing thought patterns to more normal ones, allowing a more normal life for the psychotic. Prefrontal leucotomy was first performed on a female asylum inmate in Lisbon by Egas Moniz and his surgical associate, Almeida Lima, on November 12, 1935.

At 65 he was shot in his office by one of his schizophrenic patients, but recovered to die peacefully at 82 on the farm on which he was born.

Eponyms: Egaz Moniz’ sign - Forceful plantar flexion at the ankle may result in dorsiflexion of the toes in pyramidal tract lesions.

Egas Moniz’s Siphon - the passage of the internal carotid artery through the interior of the temporal bone is named after him.