

likely that they were free of such a noticeable cortical involvement. Other causes, such as the dopaminergic loss from the caudate²⁴ or Lewy body disease²⁵ may be the source of the cognitive impairment as well. The emergence of observable lateral functional asymmetries with progression of the disease will be assessed through a follow up study of these patients, which is currently in progress in our laboratory.

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Neurological stamp

Leonardo da Vinci 1452-1519

Leonardo, famous as an artist, was also a scientist, architect, engineer and geologist. He shares with Avicenna and Fracastoro (two doctors in this series) the distinction of recognising the true origin of fossils. He designed flying machines, a turbine engine, a steamboat, and drew plans for a military tank and a submarine. Although not a physician, he was a master anatomist who predated Vesalius.

His chalk drawings remained buried for over 200 years until discovered by William Hunter in 1784. Da Vinci had shown the human body in more than 750 anatomical illustrations. This included sketches of muscles, bones, the cerebrum, blood vessels and viscera. He dissected more than 30 bodies, discovered the frontal and maxillary sinuses and described in detail the structure and function of heart valves. He was the first to show anatomy in cross section and applied this to the brain, and was also the first to make a crude diagram of the cranial nerves, optic chiasm and brachial and lumbar plexuses. His contribution to neurological anatomy included wax casts of the four ventricles. This was the first known attempt at anatomical injection. Da Vinci also showed the mechanism of action of antagonistic groups of muscles.

He found that sectioning a digital nerve produced anaesthesia so that "the finger no longer has sensation even when placed in a fire". He recognised the function of the spinal cord as a conductor and that a frog could die



suddenly following perforation of its medulla oblongata. He located the soul at the top of the spinal cord. In a drawing of his wax casts of the ventricular system, he followed the old medieval scheme allocating sensation, cognition and memory to the lateral, third and fourth ventricles, respectively.

France honoured him with a stamp issued in 1952 on the 500th anniversary of his birth (Stanley Gibbons No 1150, Scott No 682).

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