Henri Parinaud

Henri Parinaud (1 May 1844, Bellac – 23 March 1905, Paris) , considered to be the father of the French ophthalmology, was ophthalmologist and neurologist, most noted for his work in the field of neuroophthalmology.

Henri Parinaud was born into a lower-class family in 1844. His father died when Henri was 19. He went on to study medicine at Limoges, and then in Paris in 1869. When the Franco-Prussian War broke out in 1870, he went to serve as a doctor with the Red Cross, where he earned a medal for Unusual Bravery.

After the war, Parinaud returned to Paris to continue his studies. His thesis for medical school was on optic neuritis in acute meningitis in children, which earned him respect and recognition in the field. His other fields of work included multiple sclerosis, ophthalmoplegic migraine, hysteria, supranuclear lesions, and concomitant squint; all in the realm of neurology. Parinaud also worked in the physiology of vision, where he worked on role of the visual receptors, the light sense, night-blindness, and color vision.

He is well known for the medical term Parinaud syndrome, which is, “A dorsal midbrain lesion such as pinealoma which results in vertical gaze palsy, convergence-retraction nystagmus and light-near dissociation”.

Parinaud observed: ‘‘Dans l’ e´tude des paralysies motrices de l’oeil, on semble admettre que la le´sion est toujours pe´riphe´rique…Mais, le plus souvent, la le´sion est centrale…’’ [In the study of motor paralysis of the eye one seems to assume that the lesion is always peripheral…But, more often, the lesion is central…

Another medical condition named after him is Parinaud's oculoglandular syndrome (fever, papillar conjunctivitis and lymphadenopathy), a rare manifestation of cat scratch disease (caused by the bacteria Bartonella), which he was first to describe.

He referred to Louis Foville’s case of facial paralysis and conjugate gaze palsy to the left and paresis on the right side, published 25 years earlier, when he postulated4 a centre for conjugate eye movements to the left in the left side of the pons, close to the abducens nucleus.

Foville in turn referred to Edme´-Felix-Alfred Vulpian, who implicated an ascending tract in the pons contralateral to the oculomotor nucleus.

Carl Wernicke (184821905) too, had demonstrated a slowly progressive tuberculoma in the pons causing conjugate gaze palsy to the left, and left peripheral facial paralysis. The centre, Wernicke postulated, was present bilaterally, near the abducens nucleus.

Parinaud deduced there was a central system for the conjugate eye movements, and thought that the abducens nerve and the contralateral oculomotor nerve must have a connection in man, though he did not implicate the medial longitudinal bundle.

In his 10 case histories, he distinguished two groups: 1) the partial or dissociated paresis of both oculomotor nerves; and 2) conjugate eye movement disorders: ‘‘Les mouvements associe´s des yeux sont de plusieurs espe`ces; ils sont paralle`les ou non-paralle`les. Dans les mouvements paralle`les,

les yeux se de´placent dans le me^me sens, par rapport a` l'axe du corps…Les mouvements non paralle`les ont pour but de modifier les rapports des axes entre eux, de manie`re a` produire leur rencontre sur des objets fixe´s a` des distances diffe´rentes…'' [The associated eye movements are of many types; they are parallel or non-parallel. In the parallel movements the eyes move in the same direction in relation to the axis of the body…The aim of the non-parallel movements is to modify the relation of the [ocular] axes to one another in such a way that they come together on fixed objects at different distances…] In a paper in Brain, 6 Paralysis of the movements of convergence of the eyes, he described convergence disorders in more detail. Patients, observation IV and observation V, in his series are of interest: a 67 year old man could not look upward or downward except for a slight movement upward with the right eye, resulting in diplopia; and a 20 year old woman was unable to look upward, she became nauseated and complained of headache when she tried to do so. Convergence was nil in both patients and, as far as mentioned, the pupils did not react to light. Horizontal eye movements were normal. He then presented a simple scheme combining these three varieties of the same paralysis: paralysis of downward movements, paralysis of upward movements, paralysis of all vertical movements, all three in combination with convergence paralysis. However, he failed to localise the lesion precisely, referring to the lack of contemporary anatomical knowledge. We now know that Parinaud's syndrome affects both voluntary saccades and pursuit movements, with preservation of vestibulo-ocular or oculocephalic reflexes in most cases.7 The critical lesion lies in the efferent paths of the rostral interstitial nuclei of the medial longitudinal fasciculus [1)].

1)

Pearce JM. Parinaud's syndrome. J Neurol Neurosurg Psychiatry. 2005 Jan;76(1):99. PubMed PMID: 15608003; PubMed Central PMCID: PMC1739319.