False localizing sign

Neurological signs have been described as ‘false localizing’ if they reflect dysfunction distant or remote from the expected anatomical locus of pathology and hence challenging the traditional clinicoanatomical correlation paradigm on which neurological examination is based.

The notion false localizing signs was first elucidated by James Collier in 1904 on the basis of clinical examination during life and subsequent postmortem studies.

Gassel noted false localizing signs to be more common in patients with raised intracranial pressure (ICP).3 Structural imaging, particularly magnetic resonance imaging (MRI), which gives an opportunity to study pathological anatomy contemporaneous with clinical examination, has provided some new insight into the causes of these signs.

The pathogenesis of false localizing signs remain uncertain. False localizing signs occur in two contexts: As a consequence of raised ICP, which is symptomatic of intracranial pathology (tumor, hematoma, abscess) or idiopathic (idiopathic intracranial hypertension [IIH]) and with spinal cord lesions. Associated lesions may be intra- or extraparenchymal. The course of the associated disease may be acute (cerebral hemorrhage) or chronic (IIH, tumor). Disturbance of higher mental functions, cranial nerve palsies, hemiparesis, sensory features and muscular atrophy, may all occur as false localizing signs

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