Hoffmann's reflex

Hoffmann's reflex, named after Johann Hoffmann, is a finding elicited by a reflex test which verifies the presence or absence of problems in the corticospinal tract. It is also known as the finger flexor reflex. The Hoffman reflex has also been used as a measure of spinal reflex processing (adaptation) in response to exercise training.

May signify a similar UMN interruption to the upper extremities.

A sudden nipping (Elicited by flicking downward on the nail) of the nail of the index, middle, or ring finger produces flexion of the terminal phalanx of the thumb and of the second and third phalanx of some other finger; called also digital reflex (may be weakly present in normals) [1].

<html><iframe width="420" height="315" src="*www.youtube.com/embed/QjtiasgMgwY" frameborder="0" allowfullscreen></iframe></html> *Differs from the plantar reflex since it is monosynaptic (synapse in Rexed lamina IX). Can sometimes be seen as normal in a young individual with diffusely brisk reflexes & positive jaw jerk, usually symmetric. When present pathologically, represents disinhibition of a C8 reflex, indicates lesion above C8. Hoffmann sign was observed in 68% of patients operated on for cervical spondylotic myelopathy. In 11 patients presenting with lumbar symptoms but no myelopathy, a bilateral Hoffman sign was associated with occult cervical spinal cord compression in 10 (91%) [2]. The Hoffmann test has a sensitivity of 33–68%, a specificity of 59–78%, a positive predictive value of 26–62% and a negative predictive value of 67–75% Conclusion: Hoffmann sign has too low a predictive value for it to be relied upon by itself as a screening tool for, or as an idication of the presence of, myelopathy [3] [4]. —- Relation to Babinski sign Hoffmann's reflex is often erroneously called 'the Babinski's sign of the upper limb'. However the two reflexes are quite different, and should not be equated with each other. A positive Babinski sign is considered a pathological sign of upper motor neuron disease except for infants, in whom it is normal. Whereas, a positive Hoffmann's sign can be present in an entirely normal patient. A positive Hoffman's sign in the normal patients is more commonly found in those who are naturally hyper-reflexive (e.g. 3+ reflexes). A positive Hoffmann's sign is a worrisome finding of a disease process if its presence is asymmetrical, or has an acute onset. Another significant difference between Hoffmann's reflex and the Babinski sign are their mechanism of reflex. Hoffman's reflex is a deep tendon reflex (spindle fibre) with a monosynaptic reflex pathway in Rexed lamina IX of the spinal cord. On the other hand, the plantar reflex is not a deep tendon reflex, and its pathway is both more complicated and not fully understood.*

[1] , [2]
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[3]
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