Neurological Syndromes

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Pyramidal syndrome

arises from damage to the pyramidal tract

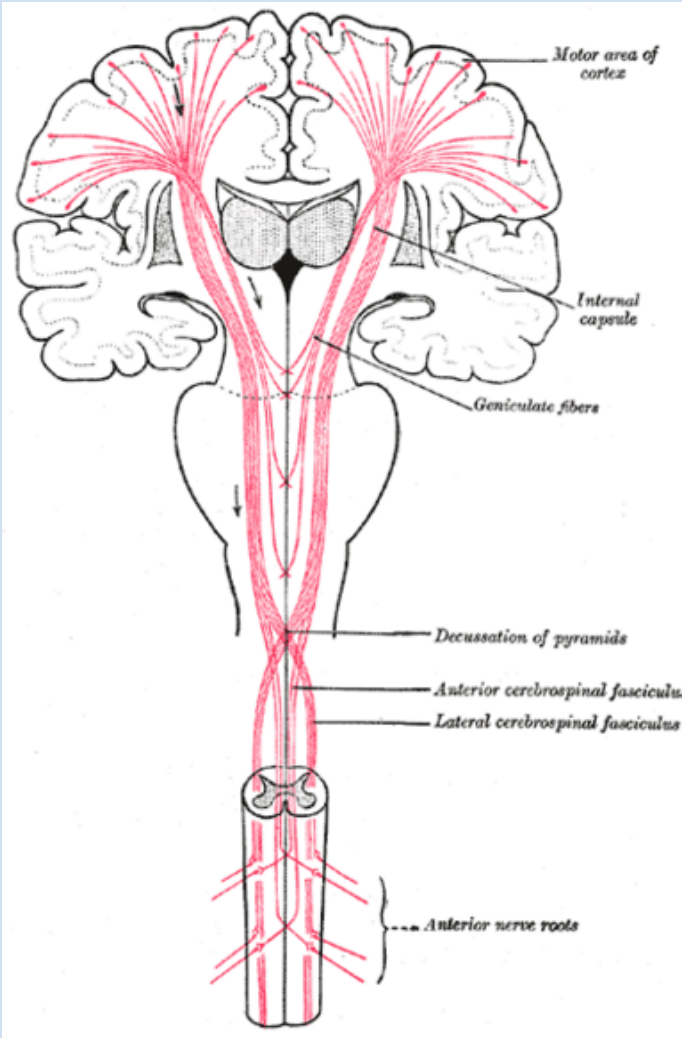
- paralysis, paresis often massive (multiple muscle groups)
- monoplegia, monopareza
- hemipareza, hemiplegia
- tatrapareza, tetraplegia
- parapareza, paraplegia

Babinski's sign: Extracted from http://commons.wikipedia.org/wiki/File:Babinski%27s_sign01.jpg.

- enhance of muscular tension-type pocket knife
- hyperreflexia deep reflexes with Jacobson reflex, patella shake and foot shake
- elimination or weakening of the skin reflexes (abdominal, plantar)
- pathological reflexes (Babiński, Rossolimo, Oppenhaim, Gordon, Chedock)

The types of syndromes spastic paralysis, depending on the location of lesions

- **monopareza** - damage to the cerebral cortex
- **paralysis of the shoulder-face or both legs on the same side** - subcortical white matter damage
- **partial paralysis on the side contrary to the side** where nerves are damaged, partialy damaged feelings, hemianopsia homonyma, hearing damage- capsula interna damage,
- **alternating syndrome** - damage to the brain stem at different levels (paralysis of the cranial nerves at the side where the brain damage is and hemiparesis on the opposite side)
- **tetraplegia tetrapareza** – damage in the spinal stem in the cervical spine
- **paraplegia (parapareza**) damage in the spinal stem in the thoracic spine



Flaccid syndrome

damage to peripheral neu(ron)al pathway i.e. in the case of damage of ganglion cells of anterior horn cells of the spinal cord or the same motor nucleus of the cranial nerve, anterior roots and peripheral nerves

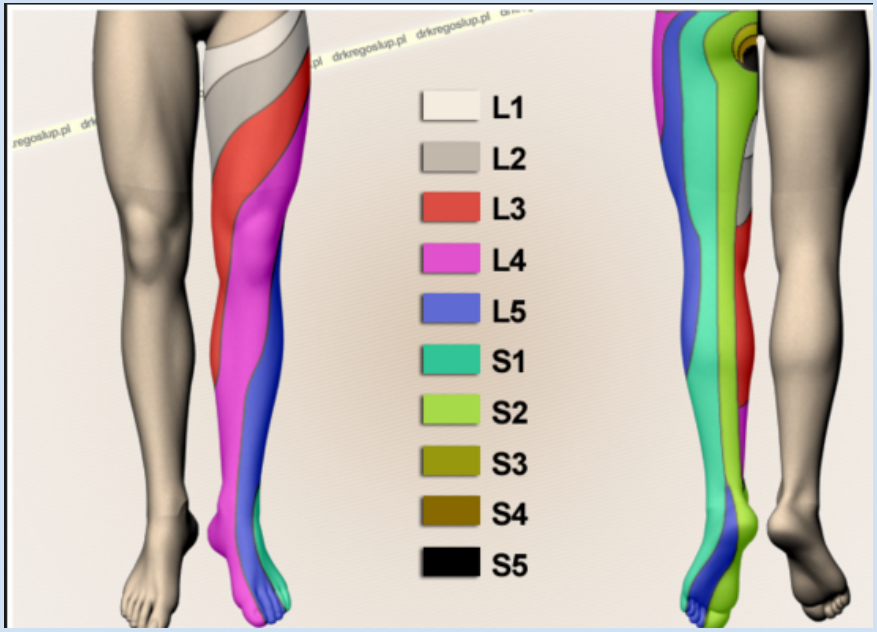
- paralysis or paresis of muscles with nerves by damaged by peripheral neuron (limited paralysis
- decrease in muscles tension
- decrease or disapperance of deep reflexes
- muscular atrophy
- electrical reaction degeneration or neurogenic record in EMG

Sensory irritation syndromes

Sciatica (Ischialgia) syndrome

arises as a result of irritation of root of peripheral nerves

- Spontaneous pain along the nerve`s length
- Painful compression along the nerve
- Stretchable pain



Sensible deficit syndromes

They are formed as a result of damage to the sensory pathways

- Symptomes: reduction (hypaesthesia) or disappearance (anesthesia) of sensation

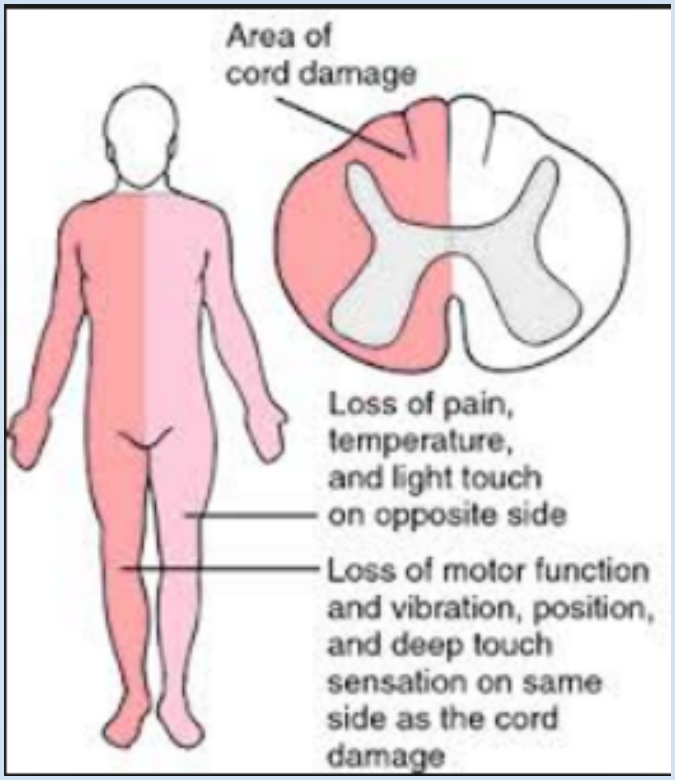
Sensory deficit peripheral syndrome

Syndroma radiculare

- sensory disturbances correspond to the root innervation
- superficial sensory disturbances apply to all kinds of sensitivity
- there can also occur deep sensory disturbances

Mixed syndromes

Hemiparaplegic syndrome – caused by damage to one half of the spinal cord

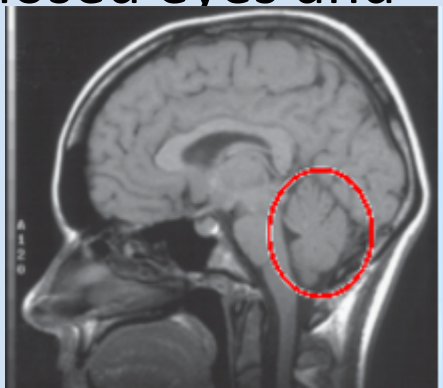


Transversus spinal cord rupture syndrome

- damage of spinal cord in dorsal part- paralysis of legs (lower limbs)
- damage of spinal cord in cervical part – paralysis of all the limbs
- disappearance of all kinds of sensory of cord-type below the injury site in the spinal cord
- disappearance of body location sensors
- appearance of a defense reflex as a sign of spinal automatism
- anal sphincters dysfunction usually of a stop nature
- erectile dysfunction

Cerebellar syndrome

- ataxia-incoordination, incoherence
- dismetria- lack of adequate measures in the movements
- adiadochokinesia- inability to make rapid alternating movement
- decreased neuromuscular tone
- nystagmus
- imbalance, positive Romberg`s test – patient falls when standing with feet together, open or closed eyes and hands in front.



Cerebellopontine angle syndrome

symptoms caused by a tumor in the area pontine angle-cerebellar

- symptoms of nerve damage VIII: hearing disorders, uncomfortable tinnitus, vertigo
- symptoms of nerve damage V: decrease or lack of corneal reflex, hypoesthesia of the face
- symptoms of nerve damage VII: peripheral paresis
- symptoms of damage to the nerves IX, X and XII

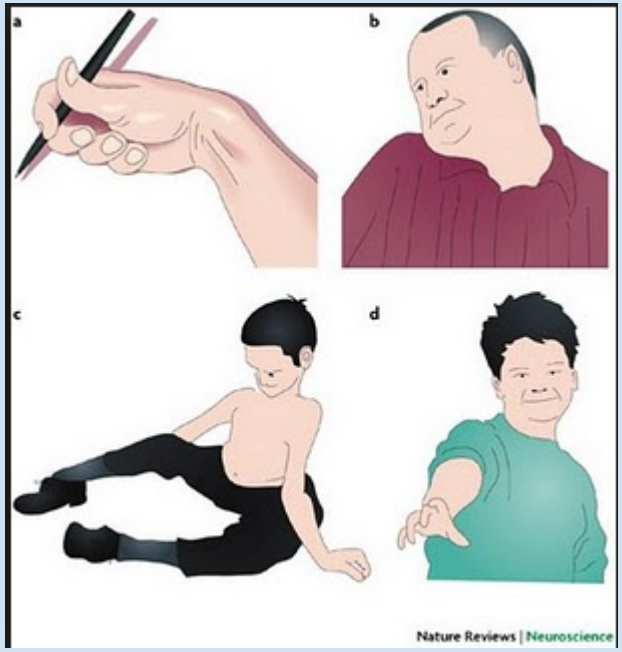
Bulbar palsy

- dysphagia(difficulty in swallowing)
- difficulty in chewing
- nasal regurgitation
- slurring of speech
- difficulty in handling secretions
- choking on liquids
- dysphonia (defective use of the voice, inability to produce sound due to laryngeal weakness)
- dysarthria (difficulty in articulating words due to a CNS problem)

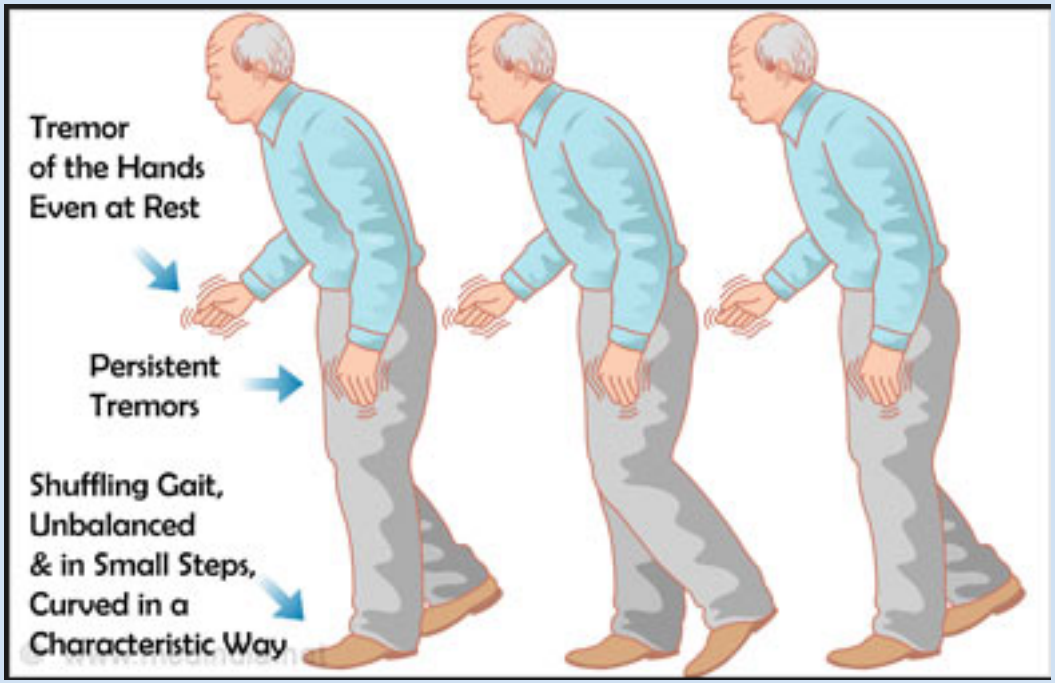
Extrapyramidal syndrome

arises from damage to the basal ganglia

- movements slow but good muscle strength
- abnormal posture and muscle tone
- abnormal physiological additional movements-no balancing limbs when walking
- disorders in the area of complex unconditioned reflexes-_protecting head against hitting, running away
- abnormal facial expressions, gesticulation, voice modulation



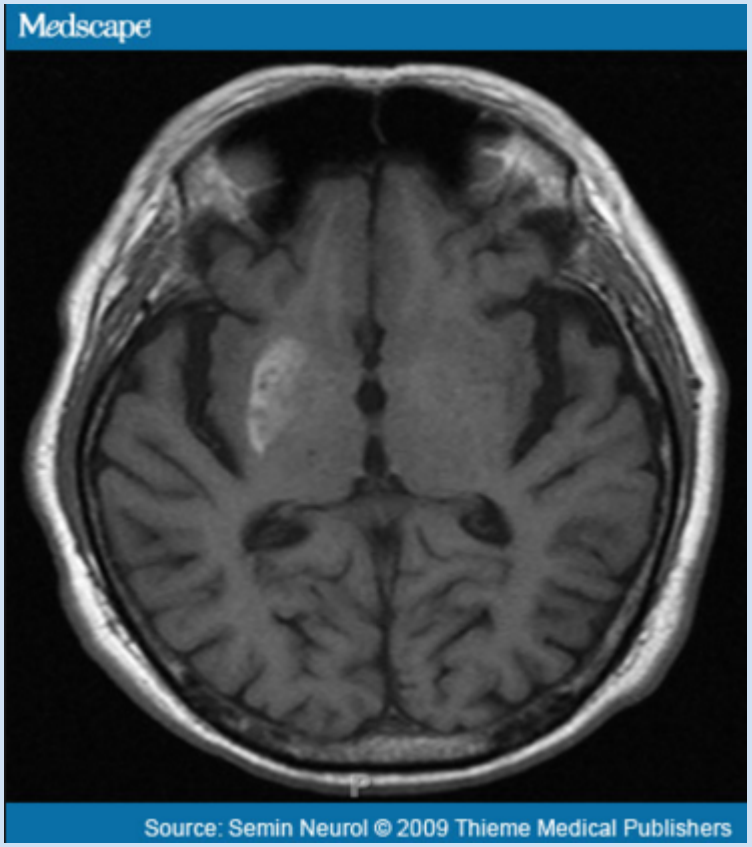
Parkinson syndrome



damage to the globus pallidus, the substantia nigra

Chorea syndrome

damage to the striatum (caudate nucleus)



Intracranial hipertension syndrome (raised ICP)

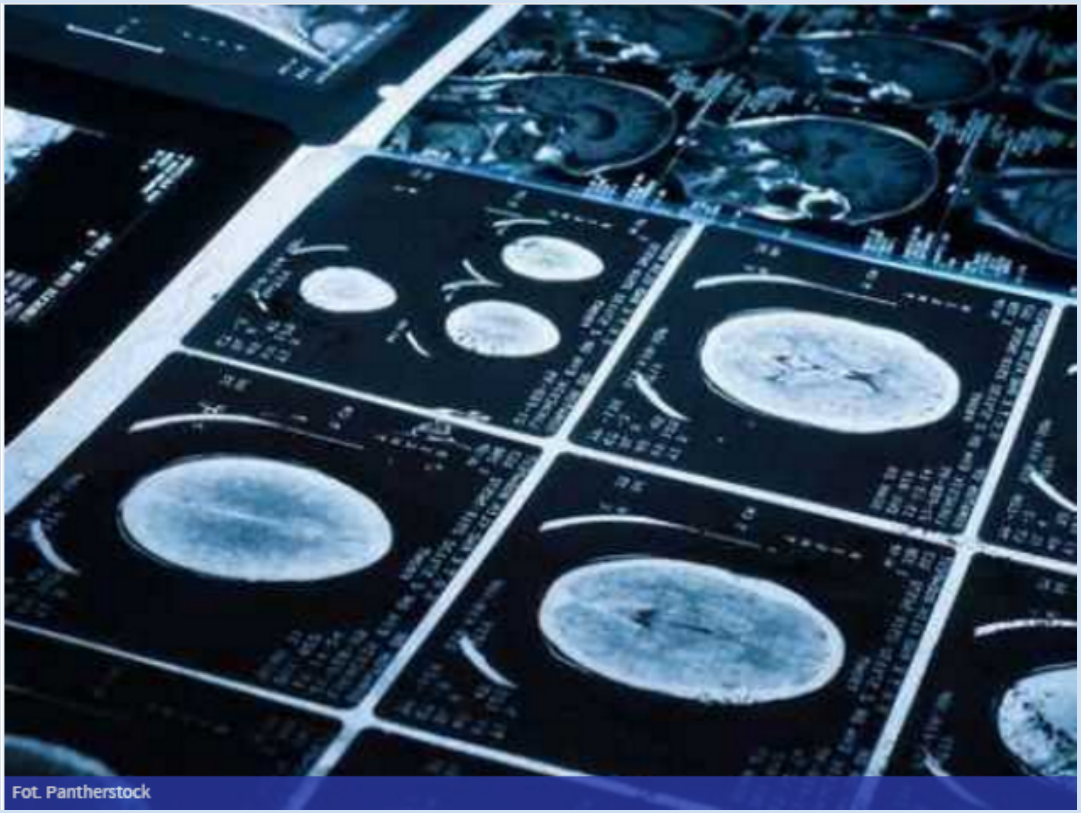
It's elevation of the pressure in the cranium. It arises from the relation between the capacity and the contents of the skull.

- Headaches
- Projectile vomiting without nausea, usually in the fasting state
- Dizziness
- Bradycardia-low heart rate
- Generalized seizures
- Altered mental functioning in the form of a slowdown, apathy
- Papilloedema at the bottom of the eye
- Edema in the EEG

Meningeal syndrome

Meningism arises from inflammation, hemorrhage, tumor

- meningial signs- Kernig`s, Brudziński`s signs
- Opistothonus
- hyperaesthesia to tactile stimuli, sound, light – increased sensitivity to stimulation
- headaches, vomiting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Thank you