CLASS 4: Sensory disorders – sensory symptoms and syndromes

I Sensory symptoms:

1. Excitatory symptoms:
   - Hyperesthesia
   - Pain
   - Hyperpathia
2. Symptoms of decreased function:
   - Hypesthesia
   - Anesthesia

1. Symptoms of sensory quantitative disorders:
   - Hyperesthesia
   - Hypesthesia
   - Anesthesia

2. Symptoms of sensory qualitative disorders:
   - Pain /spontaneous and provoked/
     - Paroxysmal pain
     - Reflected pain
     - Irradiating pain
     - Neuralgia
     - Allodynia
     - Causalgia
     - Hyperpathia
     - Phantom pain
     - Anesthesia dolorosa
   - Paresthesia

- Polyesthesia
- Alloesthesia
- Dysesthesia

II Sensory syndromes:

Sensory deficits can be classified into eight levels of the nervous system:

1. Single nerve: sensory loss within the distribution of a single nerve, most commonly median, ulnar, peroneal, lateral cutaneous nerve to the thigh.
2. Root or roots: sensory deficit confined to a single root or a number of roots in close proximity—common roots in the arm C5, C6 and C7 and in the leg L4, L5 and S1. When multiple nerve roots are involved in the lumbosacral spine (usually S1–S5 roots bilaterally), this results in a cauda equina syndrome with sensory loss in the perianal region and buttocks (saddle anaesthesiae) and the back of both thighs. Pain with root origin usually increases when the patient strains, coughs or sneezes. The reason for that is the increase of the CSF pressure and the compression of the roots.
3. Peripheral nerves: distal glove and stocking deficit.
4. Spinal cord: five patterns of loss can be recognised:
• *Complete transverse lesion*: hyperaesthesia (increased appreciation of touch/pinprick) at the upper level, with loss of all modalities a few segments below the lesion. The syndrome includes complete loss of movement (pyramid lesion) below the level of damage
• *Hemisection of the cord* (Brown–Séquard syndrome): loss of joint position sense and vibration sense on the same side as the lesion and pain and temperature on the opposite side a few levels below the lesion, combined with an ipsilateral loss of movement.
• *Central cord*: loss of pain and temperature sensation at the level of the lesion, where the spinothalamic fibres cross in the cord, with other modalities preserved (dissociated sensory loss)—seen in syringomyelia.
• *Posterior column loss*: loss of joint position sense and vibration sense with intact pain and temperature.
• *Anterior spinal syndrome*: loss of pain and temperature below the level, with preserved joint position sense and vibration sense.
5. **Brainstem**: loss of pain and temperature on the face and on the opposite side of the body. *Common cause*: lateral medullary syndrome.
6. **Thalamic sensory loss**: hemisensory loss of all modalities.
7. **Cortical loss**: parietal lobe—the patient is able to recognise all

sensations but localises them poorly—loss of two-point discrimination, astereognosis, sensory inattention.
8. **Functional loss**: this diagnosis is suggested by a non-anatomical distribution of sensory deficit frequently with inconstant findings.

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