

# **Occupational Neurologic Disease**

Dr Omid Aminian

# Occupational Neurologic Disease

- **Mechanical injuries**

Occupational entrapment neuropathies

- **Chemical neuropathies**

CNS

(most common syndrome is encephalopathy)

PNS

(The most non specific syndrome is a distal symmetrical sensorimotor polyneuropathy)

# *Occupational Entrapment Neuropathies*

<b>SYNDROME</b>	<b>ENTRAPMENT SITE</b>	<b>OCCUPATIONAL PREDISPOSITION</b>
Carpal tunnel syndrome	Carpal tunnel	Repetitive forceful finger flexion Wrist movement
Ulnar neuropathy at elbow	Cubital tunnel	Elbow flexion Repetitive elbow motion Leaning on elbow
Thoracic outlet syndrome	Cervical rib or fibrous band compressing lower trunk of brachial plexus	Carrying heavy object Sustained arm raising above shoulder

# Neurologic Symptom&Signs

<i>SYNDROME</i>	<i>EXAMPLE</i>
Acute encephalopathy	Solvents & many toxins
Chronic encephalopathy	Solvents & many toxins
parkinsonism	Mangnanese –methanol-CO
Motor neuron disease	Lead-manganese
myeloneuropathy	Nitrous oxide-- n-hexane
pollyneuropathy	Metals & many toxins

# Neurotoxins

- Most common peripheral neurotoxins
  - OP pesticides
  - carbamates
  - CS2
  - mercury
  - lead
  - arsenic
  - antimony and acrylamide

# Neurotoxins

- **Most common CNS neurotoxins**
  - arsenic, lead (epilepsy)
  - manganese (Parkinson's)
  - mercury
  - CS<sub>2</sub>
  - Chlorinated hydrocarbons
  - CO
  - benzene, toluene, xylene

# Neurotoxins

- Parkinson's
  - manganese
  - CO
  - CS<sub>2</sub>
  - MPTP n-methyl-4 phenyltetrahydropyridine