

# Skeletal Muscle Pathology For Second Year Dental Students

By

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# Duchene muscular dystrophy

- X-linked
- Pelvic and shoulder girdles
- Deletion of gene that encodes dystrophin
- Degeneration of muscles, impaired repair, fibrosis, fibrofatty deposits
- Elevated serum creatinine kinase
- Death from respiratory insufficiency, cardiac arrhythmia, 10-15 years of age wheel chair-bound

# Myotonic dystrophy

- AD
- Most common form of adult MD
- Sustained muscular contractions and rigidity
- Progressive muscle weakness and wasting
- Chromosome 19
- Atrophy of type I and hypertrophy of type II fibers
- Anticipation
  - Earlier age of onset and increased severity in successive generations

# Myotonic dystrophy

- Three clinical groups
  - Congenital
  - Adult: facial and jaw muscles, ptosis
  - Late: minimal symptoms

# Autoimmune Myopathies

- Dermatomyositis
  - Complement mediated cytotoxic Abs against microvasculature of muscle
- Polymyositis
  - Direct damage by cytotoxic T cells
- Myasthenia Gravis
  - Muscular fatigability caused by circulating Abs to acetylcholine receptor at the myoneural junction
  - Extraocular muscles, swelling muscles, extremities
  - Pts can develop other autoimmune diseases
  - 40% patients have thymoma
  - 75% of remaining thymic hyperplasia
  - Removal of thymus can be curative

# Polyarthrititis Nodosa

- Men
- Small and medium size arteries
- Vasculitis
- Decreased blood supply to organs
- Implicated
  - Hepatitis B (~30%)
  - Sulfa drugs, penicillin

# Polymyalgia Rheumatica

- Pain and stiffness around large muscle groups
- Neck, shoulders, hips

# Temporal Arteritis

- Inflammation of large arteries
- Temporal artery and other arteries
- Headache, visula changes
- Confirmatory biopsy
- If untreated can lead to blindness