Common Hand Problems

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Multi tasks
Comapact organ
Multi tasks
Compact organ
Classification

- Lumps & Bumps
- Infection
- Cuts and bruises
- Numbness or Tingling
- Birth Related
- Painful
- Bent Fingers
Median Nerve

Area of sensation
I Single tendon in rigid fibro-osseous canal

II Two independently moving tendons in rigid fibro-osseous canal

III Zone of lumbrical attachment (none rigid)

IV Zone of carpal tunnel tendons in large but rigid fibro-osseous canal

V Anterior compartment of forearm (none rigid)
Compression Neuropathies
Numbness and Tingling

- Carpal Tunnel Syndrome
- Cubital Tunnel Syndrome
- Superficial Radial nerve compression
Carpal Tunnel Syndrome

- Causes?

- Symptoms

- Tingling, numbness, swelling, weakness
Carpal Tunnel Syndrome
Diagnosis

• 2-Point Discrimination- >5mm

• Tinel’s sign- Tingling to percussion over carpal tunnel

• Phalen’s test- Wrist palmarflexion produces paraesthesia in 60 seconds

• Compression test- Direct compression over carpal tunnel with paraesthesia at 30 seconds

• NCS/EMG- ????
Carpal Tunnel Syndrome Diagnosis

- Weakness/ Waisting on Abductor Pollicis Brevis (APB)
- NCS/EMG- ????
  - Slow Nerve conduction velocity at wrist level
What can you do?

- Stretching exercises
- NSAIDS
- Splints
- Steroid injection
- Wait and watch

- **NO CONSERVATIVE TREATMENT FOR PATIENTS WITH NERVE DAMAGE**
Cubital Tunnel Syndrome

- Pressure on the ulnar nerve.
- Trauma
- Repetitive flexion
- Diabetes
- Symptoms are more on the ulnar side of the hand.
- Ring and Little finger
Cubital Tunnel Syndrome

- Pain
- Swelling
- Weakness
- Tingling/ numbness (Including dorm of hand)
- Disturbs sleep
- Worse when holding phone, elbow on desk, driving
- Ulnar claw in severe involvement
Cubital Tunnel Syndrome Diagnosis

- Positive Tinel’s sign at Cubital Tunnel
- Positive Elbow Flexion Test
- Decreased Two-point Discrimination at little finger
- Positive Froment’s sign
- Waisting of dorsal 1st webspace
- NCS/EMG
Treatment

- Life style modification
- Elbow pads
- Night splinting in 20 degrees of flexion.
- Surgical release
Painful Hand Problems

De Quervain's Tendinitis
Intersection syndrome
Arthritis
Osteoarthritis
Trigger
Basal Joint Arthritis

- Joint at the Base of the Thumb
- Carpometacarpal joint osteoarthritis
Examination

- Crepitus
- Compression test
- Grind test
Nonsurgical treatment

A splint (called a Thumb Spica Splint) can be worn during activities. This takes pressure off the thumb.

A steroid injection into the arthritic joint (the thumb CMC joint) can provide temporary pain relief.
Trapezectomy and sling correction
de Quervain's Syndrome

- Stenosing tenovaginitis of the APL & EPB in the 1st Extensor compartment of the wrist.

- Painful condition

- No obvious cause

- 10 times more common in women

- Mothers of small babies seems particularly prone to it.

- Pain with Thumb motion
Diagnosis

- **Pain** over the radial styloid

- **Finkelstein’s test** - Bend the wrist towards little finger with the thumb across the palm
What can you do?

- NSAIDS
- Splints
- Steroid injection
- Operative release required in 25% of patients after 6 weeks of failed conservative treatment.
Hand Infections

Pulp space infection
Paronychia
Palmar space infection
Flexor tenosynovitis
Dog bite
The majority of Hand Infections are the result of minor trauma for which appropriate treatment was neglected or delayed
Attempt to drain an infection, using a less-than-ideal aseptic technique…. Present with a substantial infection later.
Prompt evaluation & proper treatment

Excellent outcome vs Permanent disability.
Hand Infections

Initial Management
- Rest
- Hand elevation
- Hospital admission
- IV Antibiotics

Pulp space infection
Paronychia
Palmar space infection
Flexor tenosynovitis
Dog bite
Felon

- Infection of the distal pulp
- Unique anatomy
- 15-20 longitudinal septa
- Multiple closed compartments
- Abscess formation
Acute Flexor Tenosynovitis

- Infection of the synovial sheath that surrounds the flexor tendon
- **MOST** serious hand infection
- Destruct the gliding surface
- Left untreated- AMPUTATION
Kanavel’s signs

1. Fusiform swelling
2. Flexed position
3. Tenderness over flexor sheath
4. Disproportionate pain on passive extension
Lumps & Bumps
Ganglia

- Soft to hard mucin-filled cysts attached to tendon sheath or joint capsule.
- Very common (50-80% of hand lumps)
- Female > male
- 20s to 40s
- 60% dorsal wrist ganglia
Ganglion
Rheumatoid Arthritis
Dorsal Synovectomy
Synovectomy and ulnar head stabilization
Congenital Hand Problems

Syndactyly
Polydactyly
Cuts and bruises
Hand skin and soft tissue injury provides one of the Greatest challenges to the hand surgeon.

The injury could be a simple wound which could be closed primarily to more complexed injury with tissue loss.
Finger Tip Injuries

- Smaller soft tissue defects without involvement of deep structures are amenable to heal by secondary intention or with a skin graft
Finger - Dorsal defects
Finger fracture
Bent Fingers

- Trigger Finger
- Mallet Finger
- Dupuytrent's Contracture
- Rheumatoid Arthritis
- Post burn contracture
Trigger Finger
Mallet Finger
Extensor Tendon Rupture

Avulsion Injury
• Spectrum of injury – partial disruption

• These injuries may be complete disruptions or partial disruptions.

• The nature of the disruption may be either a tear of the tendon insertion without fracture, or a bony avulsion of the tendon from the dorsum of the base of the distal phalanx, the bony fragment being of variable size.

• In incomplete tendon injuries the resulting extension lag is no greater than 30 degrees. The patient retains a partial ability actively to extend the DIP joint.
Mallet Splint

8 weeks
Dupuytrents Disease

- Progressive fibroproliferative disorder of palmar facia producing facial fibrosis and contracture
- The deformity develops over many years (very slow process)
- The Ring and little finger are most commonly affected.
Dupuytrents Disease

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Dupuytrents Disease
When to intervene?

- Inability to lift fingers
- Table Top test
- Refer to a Hand surgeon
Thank you