Sports Injuries

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Weightlifter’s Shoulder

- RCT
- Overhead and flexion
- Impingement
Weightlifter’s Shoulder

- Distal clavicle osteolysis

Synovitis secondary to repetitive trauma
35M with right shoulder pain, injured after lifting weights
Weightlifter’s Shoulder

35M with right shoulder pain, injured after lifting weights
Weightlifter’s Shoulder

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Weightlifter’s Shoulder

35M with right shoulder pain, injured after lifting weights
Weightlifter’s Shoulder

35M with right shoulder pain, injured after lifting weights
DDX: Distal Clavicular Resoption/Osteolysis

- Post-Traumatic/Stress Induced Osteolysis
- Rheumatoid Arthritis
- Hyperparathyroidism
- Renal Osteodystrophy
- Septic Joint
- Scleroderma
- Gout

35M with right shoulder pain, injured after lifting weights
Thrower’s Shoulder

- Posterosuperior Impingement
  - Of
    - Undersurface rotator cuff
  - Between
    - Labrum
    - Humeral head
  - With
    - Abduction
    - External rotation
  - Causing
    - Labral tear
    - Undersurface RCT


Internal impingement of the shoulder: comparison of findings between the throwing and nonthrowing shoulders of college baseball players.
Internal Impingement
Internal Impingement
Internal Impingement

- Occurs in athletes when in extreme abduction and external rotation
- Supraspinatus and/or infraspinatus tendon becomes entrapped between the humeral head and posterior glenoid
- Contact here can be normal with overhand movement
- Pathologic findings due to this contact implies the diagnosis

Giaroli EL, Major NM, Higgins LD. MRI of Internal Impingement of the Shoulder. AJR 2005; 185:925-929
Internal Impingement

MRI Findings:

• Posterior humeral head cystic changes

• Posterosuperior labral pathology

• Partial undersurface tears in the supraspinatus or infraspinatus tendon

Giaroli EL, Major NM, Higgins LD. MRI of Internal Impingement of the Shoulder. AJR 2005; 185:925-929
Slot Machine Tendinitis

- Tenderness of the shoulder from playing slot machines.
- Tender over biceps in bicipital groove
- Rx – win early

82M Biceps tendinosis

Slot Machine Tendinitis

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Slot Machine Tendinitis

- Tenderness of the shoulder from playing slot machines.
- Tender over biceps in bicipital groove
- Rx – win early

Tear of long head of biceps

Trap shooter's shoulder

- Stress fracture of coracoid
- Occ. Poor technique acute injury
Trap shooter's shoulder

- Stress fracture of coracoid
Trap shooter's shoulder
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Coracoid physeal injury 15M
Trap shooter's shoulder
Trap shooter's shoulder

Coracoid physeal injury 15M
Trap shooter's shoulder
 Trap shooter's shoulder

Coracoid physeal injury 15M
Trap shooter's shoulder
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Coracoid physeal injury 15M
Trap shooter's shoulder
Trap shooter's shoulder

Coracoid physeal injury 15M
Little Leaguer’s Shoulder

- Overuse fatigue
- Proximal humeral physis
- “Salter Harris 1”
- Widened and irregular physis
- Compare with contra

Dotter WE. Little Leaguer’s shoulder. Guthrie Clin Bull 1953; 23:68.
Little Leaguer’s Shoulder

Torsional overload
11-16 boys
83% pitchers

Little Leaguer’s Shoulder

Signs:
- Widened laterally
- Lateral metaphyseal fragmentation
- Lateral metaphyseal calcification
- Demineralization
- Metaphyseal sclerosis
- Rarely slipped capital humeral epi.

Little Leaguer's Shoulder

Complications:

- Limb shortening 10%
- Osteonecrosis of humeral head
- Humerus varus deformity

Little Leaguer’s Shoulder

Cor T1

Cor PD FS
SH2 Proximal humerus
Blocker’s Arm

- Blocker’s or Tackler’s Exostosis
- Anterolateral humerus
- Distal to shoulder pads
- Heterotopic ossification
- Myositis ossificans
- Periosteal damage
- Grows by accretion
Blocker’s Arm

8W post injury
Blocker’s Arm
Blocker’s Arm

- Post traumatic myositis ossificans
  - 4/52 Faint peripheral Ca
    - Periosteal reaction
  - 8/52 Circumscribed cortex
    - Central lacy pattern
  - 5/12 Maturity
  - >6/12 Regression
    - Separate from bone
  - 1 year Usually disappears
    - Periosteal reaction remains
Blocker’s Arm

- Sport related myositis ossificans
  - Single direct blow
  - Repeated minor trauma
    - Adductor longus-Rider’s bone
    - Brachialis-Fencer’s bone
    - Soleus-Dancer’s bone
    - Blocker’s arm
Tennis King Kong Arm

- Overdevelopment of dominant arm
- Depressed scapula
- Protracted shoulder posture
- Large forearm

Tennis King Kong Arm

- Overdevelopment of dominant arm
- Depressed scapula
- Protruded shoulder posture
- Large forearm

Tennis Elbow

- Coined in the 1880’s
- 10-50% of players
- Backhand stroke
- Rare in double handers
- Lateral epicondylitis
  - (no itis)
  - Angiofibroblastic tendinosis
- Common extensor origin
  - ECRB tendinosis
  - ED communis also common
Tennis Elbow

- **Risk factors**
  - >30 years
  - Improper grip size
  - Metal racket
  - >2hrs per day
  - Tight strings
  - Snapping wrist backhand

- **XS motion, vibration, string tension**
Tennis Elbow

- Radiographic findings
  - STS
  - Calcification 20-30%
Hooker’s Elbow

- Painful elbow swelling suffered by fishermen repeatedly jerking upwards on a fishing line.

- Lateral epicondylitis
Tennis Elbow
Lateral Epicondylosis

Normal

Lateral Epicondylosis
Resistant Tennis Elbow

- Radial collateral ligament rupture.
- Radial tunnel syndrome
  - Posterior interosseous branch of radial n.
  - Fibrous arch of supinator (Arcade of Frohse)
  - Distally through supinator

Radial neuritis
Medial Tennis Elbow

- Medial tennis elbow
  - Lateral:Medial 7:1
  - From acceleration during serving
Medial Epicondylitis

- Baseball pitchers
- Little league elbow
- Golfer’s elbow
- Medial Tennis elbow
- Javelin, Racquetball, Squash, Swimmer’s

- Epicondylitis 10X more common laterally
- Disruption more common medially
Medial Epicondylitis

- Tendon degeneration - Tendinosis
- Partial tear
- **Tendon disruption**
- Muscle strain

Disruption more common medially
Golf Arm

- Shoulder and elbow pain after too many rounds of golf.

BMA Journal, 1896
Golf Elbow

- Historically medial epicondylitis of dominant arm
- Overuse of FCR / pronator muscle mass
- Valgus stress at top of back swing to point of impact
- Hitting the ground
- Associated Ulnar neuropathy
- Medial laxity
Golf Elbow

- Actually more common to have lateral epicondylitis of non dominant hand
- Forceful extension with twisting

Common Flexor Tendinosis

Cor T1                     Cor PDFS                  Cor T2FS
Little Leaguer’s Elbow

- Purists
  - 9-12Y
  - Throwers
  - Medial traction apophysitis / epicondylitis
  - Repetitive valgus stress
  - Hypertrophy of medial epicondyle
  - Microtearing of flexor / pronator group
  - Fragmentation of medial epicondylar apophysis

Little Leaguer’s Elbow

Rt

Lt
Medial Epicondylitis

13 year old pitcher with elbow pain
Medial Epicondyle Avulsion

3 different patients
Little Leaguer’s Elbow

- Panners disease
- 5-10Y Boys
- Osteochondrosis of the capitulum
- Trauma history
- Fissuring and increased density
- Decreased size, fragmentation, resorption
Little Leaguer’s Elbow
Dog Walker’s Elbow

- Pain caused by constant tension and tugs from a dog leash.

- Medial or lateral epicondylitis depending on dog

51F with 2 Bouviers. Dog ran off with leash, patient still holding.
Dog Walker’s Elbow

Lateral and Medial epicondylitis
Climber’s Elbow

- Brachialis tendinosis
Bull riders forearm

Upper extremity forearm Ulna stress fx
Gymnast’s Wrist

- “Salter Harris 1”
- Repetitive strain
- Distal radial physis


Gymnast’s Wrist
Oarsmen’s / Bugaboo wrist Intersection Syndrome

- Oarsmen's wrist
- Crossover syndrome
- Squeaker's wrist
- Bugaboo forearm
- Peritendinitis crepitans
- Subcutaneous perimyositis
- Abductor pollicis longus bursitis
- Abductor pollicis longus syndrome
Oarsmen’s / Bugaboo wrist

- Overuse syndrome of the distal forearm
- Heavy and repetitive use of the wrist and thumb
- Wringing, grasping, turning and twisting motions
- Secretaries, carpenters, maintenance, filing workers
- Athletes involved in weightlifting, rowing or canoeing
- Rice-harvesting workers in Thailand
Oarsmen’s / Bugaboo wrist

- Inflammation at the intersection of the first dorsal extensor tendon compartment and second dorsal extensor compartment (DETC)
- Friction of the muscle bellies of the 1st DETC with the tendon sheath of the 2nd DETC
- Entrapment from stenosis of the 2nd DETC
Oarsmen’s / Bugaboo wrist

39yo male with knot over left forearm with grinding and popping
Oarsmen’s / Bugaboo wrist

Ax T2FS

Ax T1

39yo male with knot over left forearm with grinding and popping
Oarsmen’s / Bugaboo wrist

Ax T2FS

Ax T1

39yo male with knot over left forearm with grinding and popping
Oarsmen’s / Bugaboo wrist

Ax T2FS

Ax T1

39yo male with knot over left forearm with grinding and popping
Oarsmen’s / Bugaboo wrist

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Oarsmen’s / Bugaboo wrist

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Oarsmen’s / Bugaboo wrist

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Oarsmen’s / Bugaboo wrist

Ax T2FS

Ax T1

39yo male with knot over left forearm with grinding and popping
Oarsmen’s / Bugaboo wrist

Ax T2FS

Ax T1

39yo male with knot over left forearm with grinding and popping
Construction worker with recent worsening of chronic wrist pain. Feels swelling/mass along distal dorsal wrist.
Tennis Wrist

- Tenosynovitis (Tenovaginitis) of the tendons of the wrist in tennis players.
Tennis Wrist

ECRB

ECRL

EPB

EPL

APL
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Tennis Wrist
Racket Player’s Pisiform

- Repetitive strain on Pisiform.
Racket Player’s Pisiform
Golfer Wrist

- Stress fracture of hook of hamate
- Non-dominant hand
  - Greater stress closer to butt of club
- Also seen in tennis and baseball

Golfer Wrist

53M Hook of Hamate fx
Golfer Wrist

Hook of hamate fracture 53M
Boxer’s Knuckle

Damage to the sagittal bands of the extensor hood which help stabilize the extensor tendon during joint motion.

Sxs: pain, swelling, loss of full range of motion, subluxation of the extensor tendon

T2 Fat Sat with fingers extended

Subluxation of extensor tendon after clenching fist

Radiology 2003;228:642-646.)
Boxer Knuckle

Axial T2FS

54yo M with contusion to hand
Boxer Knuckle

Axial T2FS

54yo M with contusion to hand
Boxer Knuckle

Axial T2FS

54yo M with contusion to hand
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Axial T2FS
Boxer Knuckle

Axial T2FS

54yo M with contusion to hand
Boxer Knuckle

Axial T2FS

54yo M with contusion to hand
Boxer’s Fracture

- Saturday night Fx
- Brawler Fx
- 5th MC neck Fx
- Watch for associated base of 4th MC Fx

Rugger Jersey finger

- Jersey grabbing tackle
- Avulsion of FDP at base of distal phalanx
- Ring > Middle
- Tendon often retracts to PIPJ


Avulsion fracture of the flexor digitorum profundus tendon ('Jersey finger') type III.
Arch Orthop Trauma Surg. 2002 Apr;122(3):182-3
Rugger Jersey finger

- Jersey grabbing tackle
- Avulsion of FDP at base of distal phalanx
- Ring > Middle
- Tendon often retracts to PIPJ

Climber’s Finger

- Partial or complete rupture of A2 pulley
- Crimp or pocket grip
- 2nd or 3rd digit
- May extend to A3 and A4 pulleys
- Localized fluid
- Increased distance between tendon and phalanx
Climber’s Finger

38 year-old man with second finger trauma one month ago. Ultrasound showed flexor tendon thickening.
Wellie Thower’s Finger

- Injury to finger joints sustained in wellie throwing contests.
- Volar plate Fx

Wellie Thrower’s Finger

- Injury to finger joints sustained in wellie throwing contests.
- Volar plate Fx

Baseball Finger

- Mallet finger, dropped finger
- Ball or other object striking the end or back of the finger
- Resulting in rupture of the attachment of the extensor tendon.
- Bony or tendon

Baseball Finger

Stark HH, Bayes JH, Wilson JN. Mallet finger.
Fish hook finger
Skier’s Thumb

- AKA Gamekeeper’s thumb, Breakdancer thumb
- Thumb abduction
- MCP-UCL proper sprain/tear
- Accessory UCL, volar plate and dorsal capsule add stability
- X-ray prior to stress

Skier’s Thumb - UCL Avulsion

Skier’s Thumb - UCL Complete Rupture

- Stress in 20-30 degrees of flexion
- 10-20 degrees laxity worse than contra
- 30-35 degrees of absolute laxity
- >35 degrees
Skier’s Thumb
Skier’s Thumb

- Stener lesion
- Adductor aponeurosis interposed
- >2-4 mm displaced avulsion
- MRI or US to see
- Need operative repair

Skier’s Thumb - Stener lesion
Ping Pong Fracture

- Depressed skull fracture usually seen in young children, resembling the indentation that can be produced with the finger in a ping-pong ball; when elevated it resumes and retains its normal position.
Body Builders Psychosis

- Psychotic episodes associated with the use of anabolic steroids

- Causing:
  - hallucinations
  - paranoid delusions
  - grandiose beliefs
  - manic-depressive symptoms.

Lancet, 1987
Spear Tackler’s Spine

- Vertical compression
- Axial loading with mild flexion
- >50% of quadriplegia in AF
- Defensive backs

Brigham CD, JBJS 2003;85-A(2):381-2
Spear Tackler’s Spine

Sag T1

Sag T2

Sag T2FS
Rebounder’s rib

- 1st rib Fx
- Muscular exertion
- Scalenes pull up
- Intercostals pull down
Rebounder’s rib

- 1st rib Fx
- Muscular exertion
- Scalenes pull up
- Intercostals pull down
Rebounder’s rib

- 1st rib Fx
- Muscular exertion
- Scalenes pull up
- Intercostals pull down
Rebounder’s rib
Rebounder’s rib
Rebounder’s rib
Rebounder’s rib
Poker back - Poker spine

- Not related to the game of poker
- Rather a stiff fire-poker
- Sign of ankylosing spondylitis
Rugger Jersey Spine

- Renal osteodystrophy
- Osteomalacia
- Secondary hyperparathyroidism
Cricket Bowlers Side Strain

- Uncommon sporting injury presenting with pain and tenderness over anterolateral and posterolateral lower ribcage

- Associated with cricket, golf, and ice hockey – eccentric contraction of trunk muscles

- Partial or complete tear of lateral abdominal wall musculature (internal oblique > external oblique > transversus abdominis)

- May also see avulsion at the muscular origins from the lower ribs

- Full recovery is the norm takes 6-10 weeks
Cricket Bowlers Side Strain

- Partial or complete tear of lateral abdominal wall musculature (internal oblique > external oblique > transversus abdominis)
Cricket Bowlers Side Strain

- Partial or complete tear of lateral abdominal wall musculature (internal oblique > external oblique > transversus abdominis)
Jet Ski Open Book Pelvic Fracture

- Striking the steering column during rapid deceleration
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Jet Ski Open Book Pelvic Fracture
Sprinter’s Fracture

- Fracture of the anterior superior or inferior spine of the ilium
- Fragment of the bone being pulled off by muscular violence, as at the start of a sprint.
Sprinter’s Fracture
Sprinter’s Fracture

Acute AIIS avulsion 14M
Hurdler’s Fracture

- Ischial tuberosity avulsion
- Forced flexion from hyperextension
- Also common in soccer, water skiing
Hurdler’s Fracture
Total Hamstring Avulsion

Can be one or all components of hamstrings
Bilateral hamstring avulsions

Cor PDFS
Bilateral hamstring avulsions
Bilateral hamstring avulsions

Cor PDFS
Bilateral hamstring avulsions
Soccer groin
Secondary cleft sign

Secondary Cleft Sign as a Marker of Injury in Athletes with Groin Pain
Radiology 2005  Brennan D et al
Secondary Cleft Sign as a Marker of Injury in Athletes with Groin Pain
Radiology 2005  Brennan D et al
Secondary Cleft Sign as a Marker of Injury in Athletes with Groin Pain

Radiology 2005  Brennan D et al
Soccer groin
Secondary cleft sign

Frontal diagram shows anatomy of the symphysis pubis and the appearance of the secondary cleft.

A = hip adductor aponeurosis
B = gracilis aponeurosis
C = conjoined tendon aponeurosis
D = central physiologic cleft of the fibrocartilaginous disk
E = secondary cleft.
Rider’s Leg

- Strain of the adductor muscles of the thigh in horseback riders.
Rider’s Leg - Adductor strain
Rider’s Leg - Adductor strain
Rider’s Leg - Adductor strain
Horse Rider’s Bone

- AKA Cavalry bone
- Localized ossification of the inner aspect of the lower end of the tendon of the adductor muscle of the thigh (adductor tubercle.)
Horse Rider’s Bone
Adductor Magnus Ossification

Cor T1

Cor PDFS
Quick-Draw Leg

- Bullet wound in leg from practicing fast draw from gun in belt holster

JAMA, 1966
Quick-Draw Leg
Quick-Draw Leg

Quick draw foot 17M
Cricket Thigh

- Rupture of some of the fibers of the rectus femoris, which may occur in playing cricket or football.

- Sometimes the tendon of the quadriceps or that of the patella is also ruptured.
Cricket Thigh
Rectus Femoris Strain

- **Grade 1**
  - Few fibers torn
  - No loss of function
  - Feathery fluid signal

- **Grade 2**
  - Some loss of strength
  - Focal mass
  - Partial tear of myotendinous junction

- **Grade 3**
  - Complete rupture
  - Loss of function
  - Retraction
Cricket Thigh
Rectus femoris tendon complete tear

27 year old male with sports related injury.
Cricket Thigh
Rectus femoris tendon complete tear

27 year old male with sports related injury.
Breaststroker’s Knee

- Valgus strain in whip kick
- MCL stress
- PF dysfunction
- Medial synovial plica syndrome

Breaststroker’s Knee
MCL Tear

Cor PDFS

Cor T1

Breaststroker’s Knee
MCL Tear
Breaststroker’s Knee

Type 1 medial patella plica
Musher’s Knee

- Iliotibial band syndrome
- Sharp backward kicking of the leg to spur the team

Musher’s Knee
Iliotibial band friction syndrome

- Intense activity leads to abnormal contact between the ITB and the LFC.

- Findings include edema superficial or deep to the ITB, joint effusion, fluid collection deep to the ITB or thickening of the ITB.

- Fluid is likely within an adventitious bursa.
Musher’s Knee
Iliotibial band friction syndrome
Musher’s Knee
Iliotibial band friction syndrome
Musher’s Knee
Iliotibial band friction syndrome

Musher’s Knee
Iliotibial band friction syndrome
Football Knee

- “A swollen, relaxed, somewhat tender condition of the knee seen in football players”
- Patellar tendinosis
- AKA jumper’s knee
- An insertional tendinopathy
- Proximal patellar tendon (65%)
- Distal quadriceps tendon (25%)
- Distal patellar tendon (10%).
Jumper’s Knee

- Patellar tendinosis
- Pain and tenderness over the lower pole of the patella
- Similar to that occurring in Sindig-Larsen-Johansson disease, without radiographic changes
- So called because of its occurrence in athletes
  - Basketball
  - Volleyball
  - Soccer
Jumper’s Knee
Jumper's Knee

Lat  Sag PD  Sag T2  Sag PDFS

Jumper's knee 31M
Jumper’s Knee

Sag PD

Sag T2
Rugby Knee
Osgood-Schlatter disease

- Osgood-Schlatter disease
Rugby Knee
Osgood-Schlatter disease
Genu Amoris
Lover’s knee

- Swelling and pain in the knee from making love in an unusual position.
Genu Amoris
Lover’s knee
Wrestler Knee

- Prepatella bursitis
- AKA Housemaids knee, Carpet layer knee
- Chronic mechanical irritation
- Preacher knee is infrapatella bursitis

Wrestler Knee

Pre-patella bursa
Dancer’s Bone

Rt soleus tendon/myotendinous junction ossification.
Tennis Leg

- Previously plantaris tendon rupture
- Medial head of gastrocnemius sudden rupture at MTJ
- Forced dorsiflexion
- Older persons participating in tennis and other sports.

Tennis Leg

Tennis Leg
Medial head of Gastrocnemius tear

Partial Medial head of Gastrocnemius tear – fluid fluid level
Tennis Leg
Medial head of Gastrocnemius tear
Tennis Leg
Medial head of Gastrocnemius tear
Tennis Leg
Tennis Leg

Plantaris tendon rupture
Tennis Leg

Plantaris tendon rupture
Tennis Leg

Plantaris tendon rupture
Tennis Leg

Plantaris tendon rupture
Tennis Leg

Plantaris tendon rupture
Tennis Leg

Plantaris tendon rupture
Runner Fracture

- Stress (fatigue) fracture distal 5cm of fibula
- Training on hard surfaces
- Especially ultradistance runners

Runner Fracture
Runner Fracture

Sag STIR

Sag T1
Runner Fracture

Bilateral tibial stress fractures 31M
Bilateral tibial stress fractures 31M Runner Fracture
April 07

46 year old male marathon runner with right leg pain
46 year old male marathon runner with right leg pain

Runner Fracture
Runner Fracture

April 07

46 year old male marathon runner with right leg pain
46 year old male marathon runner with right leg pain
46 year old male marathon runner with right leg pain
MRI grading of stress injuries

- 0 Normal
- 1 Subtle periosteal edema
- 2 Periosteal edema and increased marrow signal on fat-suppressed T2, subtle on T1
- 3 More extensive periosteal edema and marrow signal on T1 and T2
- 4 Discrete fracture line on MR or plain film (true stress fracture)

Fatigue fx distal tibia
Fatigue fx distal tibia
Fatigue fx distal tibia
Paratrooper Fracture

- Fracture of the posterior articular margin of the tibia and/or of the internal or external malleolus.
Paratrooper Fracture

- Fracture of the posterior articular margin of the tibia and/or of the internal or external malleolus.
Snowboarder’s Ankle  
Snowboarder’s Fracture

- Lateral process of talus Fx
- Dorsiflexion and hindfoot inversion on landing
- Difficult to see on radiographs, may need CT
- Unrecognized causes subtalar OA
- CT may be required to see and classify
  - Type 1. Chip off anterior inferior
  - Type 2a. Involves talofibular joint
  - Type 2b. Involves talocalcaneal joint
  - Type 3. Comminuted Fx
Snowboarder’s Ankle
Snowboarder’s Fracture


Snowboarder’s Fracture
Type 2b lateral process Talus Fx
Snowboarder’s Fracture
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Snowboarder’s Fracture
Type 2b lateral process Talus Fx
Snowboarder’s Fracture
Type 2b lateral process Talus Fx

Cor T1

Cor PDFS
Snowboarder’s Fracture
Type 2b lateral process Talus Fx
Snowboarder’s Fracture
Type 2b lateral process Talus Fx

Cor T1

Cor PDFS
Snowboarder’s Fracture
Type 2b lateral process Talus Fx

Cor T1

Cor PDFS
Snowboarder’s Fracture
Type 3 lateral process Talus Fx
Snowboarder’s Fracture
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Snowboarder’s Fracture
Type 3 lateral process Talus Fx
Aviator’s Astragalus

• Forefoot hyperextension
• Rudder bar into instep
• Tight achilles
• Fracture of talar neck
• +/-
  • Anterior tibia injury
  • Subtalar dislocation
  • Posterior talar body dislocation

Aviator’s Astragalus

- Forefoot hyperextension
- Rudder bar into instep
- Tight achilles
- Fracture of talar neck
- +/-
  - Anterior tibia injury
  - Subtalar dislocation
  - Posterior talar body dislocation
Dancer’s Tendinitis

- FHL
- Within fibro-osseous tunnel
- Ass. Trigger toe
- Can go on to rupture

Dancer’s Tendinitis - FHL Synovitis
Dancer’s Tendinitis - FHL Synovitis
Dancer’s Tendinitis
FHL Tenosynovitits
Dancer’s Heel

- Posterior ankle impingement
- Medial and lateral tubercles on posterior talus
- FHL between them
- Lateral tubercle non-union = os trigonum 10%
- Bilateral 50%
- Plantar-flexion or en point
- Large posterior (Stieda) process or os trigonum
- Causes fibrosis
- Posterolateral pain
Dancer’s Heel - Os Trigonum
Dancer’s Heel
Os Trigonum Syndrome

Dancer’s Heel
Os Trigonom Syndrome

Ankle Pain
Basketball Foot

- Inversion and varus stress on landing
- Medial subtalar dislocation
- Talocalcaneal and talonavicular
Basketball Foot
Medial Subtalar Dislocation
Lovers Fracture

- Don Juan

Jogger’s Foot

Master knot of Henry

AbH
QP

Jogger’s Foot
Baxter’s neuropathy
Inferior Calcaneal nerve

Medial Plantar Nerve
Lateral Plantar Nerve
Jogger’s Heel

Rt Cor T1

FDB

Lt Cor T1

AbDQ

Abd digiti quinti atrophy
Kickboxer’s feet

- Tarsal bone fatigue fractures
- Tarsal contusions
- Often bilateral
Kickboxer’s feet

Sag PD

Sag PDFS

55F Calcaneal stress fracture
Kickboxer’s feet

Sag PD

Sag PDFS

55F Calcaneal stress fracture
Kickboxer’s feet

Sag PD

Sag PDFS

55F Calcaneal stress fracture
Kickboxer’s feet

Sag PD

Sag PDFS

55F Calcaneal stress fracture
Dancer’s fracture
March Fracture

- Metatarsal stress fracture
- Also seen in Ballet
- Middle and distal shafts 2\textsuperscript{nd} and 3\textsuperscript{rd}
- Periostitis
- 1\textsuperscript{st} base, less periostitis

Skimboarders toe

- Hyperdorsiflexion

Skimboarder’s Toe 1\textsuperscript{st} IPJ
Turf Toe - Clinical

- Football players
- Playing on hard artificial surfaces
- Wearing light flexible shoes
- Hyperextension injury MTP joint
Turf Toe - Plantar Plate

- Fibrocartilaginous structure extending from the volar aspect of the metatarsal necks to the proximal phalanges of the toes

- Reinforces the MTP joint capsule
Turf Toe

Disruption of volar plate

Normal recess

Male wrestler jammed toe into mat