



THE UNIVERSITY OF TOLEDO
MEDICAL CENTER

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THE UNIVERSITY OF TOLEDO MEDICAL CENTER

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Empowering Your Employees: It's a Good Thing!

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Give the authority, power and responsibility to your team members if they are ready to handle the tasks!

Don't treat them as employees, treat them as partners! Elevate them!

1. Give up a small amount of control in order to achieve a large amount of success. **SUCCESS!**
2. Create a favorable environment that encourages people to express their ideas and grow their skills and their strengths.
3. Let other people make decisions!

-Let your employees take ownership and commitment for these decisions; -Do not be critical, opinionated or stubborn; -Focus less on yourself and being right; -Do not undermine the confidence of your employees. Give them discretion over their resources. Your employees are the best people to understand their job; they know what works! Let the employee do what is necessary to get the job done!

Encourage the employee and give them the experience, tools and wisdom! The leader should act as an advocate to encourage employees to empower themselves! Any project can be multifaceted, including the task, obstacles, opportunities as well as failures. Give



them a portion of the tasks! You can allow the employee to make decisions, share information and try new ideas. However, with authority comes responsibility. Empowering your employees is a good thing!

Reiter's Syndrome

Reiter's Syndrome is a type of reactive arthritis that happens as a reaction to bacterial infection in the body. It is characterized by:

- Urethritis, inflammation of the urethra with the most common symptom being painful or difficult urination;
- Conjunctivitis, inflammation of the outer membrane of the eyeball and the inner eyelid. The eye is not infected, however the immune system is acting as if the eye is infected.
- Joint Arthritis (reactive arthritis), asymmetrical (the knees and the joints of the ankles and feet are the usual targets of reactive arthritis). Fluid culture is negative for infection. Infection enters the body and triggers the immune system. The immune system creates antibodies. The antibodies attack the infection. These antibodies then cross over and attack the normal body cells. This is why they call it reactive arthritis. It reacts to the

infection that the body already went through. It usually is associated with infection after the initial infection is gone (residual immune effect). What are the infections associated with Reiter's Syndrome?

- GI Infection (Salmonella and Sigella).
- GU Infection (Gonorrhea and Chlamydia).

- Some people are more susceptible to Reiter's Syndrome than others.
- Most cases resolve within weeks, but may last longer.

- Recurrence in 50% of patients. -Reiter's Syndrome usually starts 1-3 weeks after the original infection (up to 45 days).

- The patient has a seronegative spondyloarthropathy

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Reiter's Syndrome continued

(a family of disorders which includes ankylosing spondylitis and psoriatic arthritis).

> 75% of patients are positive for HLA-B27. Remember that in test examinations, they may test on Achilles tendon pain (Achilles tendonitis) with heel pain (plantar fasciitis) and its association with

Reiter's Syndrome. Also, remember that Cipro (an antibiotic used to treat bacterial infections) can cause rupture of the Achilles tendon.

TREATMENT: • Symptomatic treatment. • Observation. • Antibiotics for the underlying infection. • Steroids for severe cases.

Reiter's Syndrome is not Gonococcal Urethritis.

Examination of the AC Joint

The AC joint is located at the top of the shoulder where the acromion of the scapula and the clavicle join together. The AC joint is a small synovial gliding joint. The AC joint can be affected by arthritis and osteolysis.

The oblique orientation of the joint's articular surfaces may allow the acromion to be driven underneath the clavicle when the AC joint is injured. The condition could be subtle.

Injuries of the acromioclavicular joint most commonly occur due to separation of the AC joint. Falling directly onto the shoulder can injure the ligaments that stabilize the AC joint. The AC ligament provides anterior-posterior stability of the AC joint. The posterior and superior AC ligaments are most important for stability. The Coracoclavicular ligaments provide superior-inferior stability. (Acromioclavicular Ligament; Trapezoid Ligament; Conoid Ligament).

SYMPTOMS: -Activity related pain with overhead activity and arm adduction.

HOW TO TEST FOR INJURY TO THE AC JOINT?

- Start by palpating the AC joint.

- Check to see if pain is present with direct palpation of the AC joint.

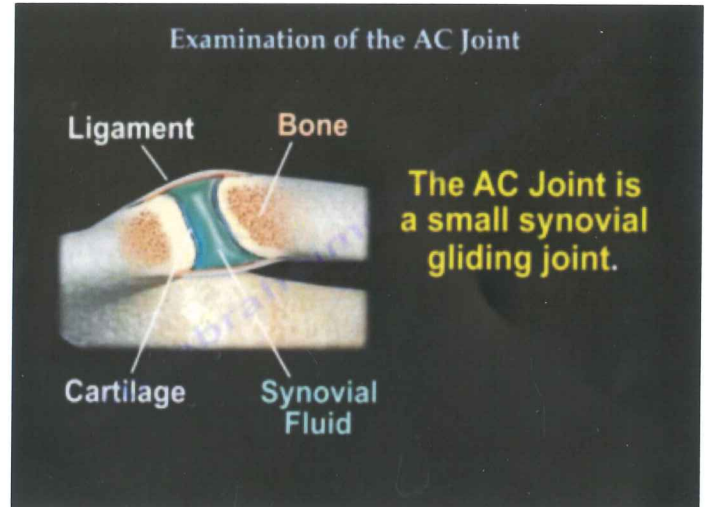
- If pressing down onto the AC joint causes pain, this is a sign of an AC joint problem such as distal clavicle osteolysis, arthritis, sprain of the AC ligament or separation.

OSTEOLYSIS OF THE DISTAL CLAVICLE: Common in weightlifters

Localized area of inflammation, hyperemia, microfracture, bone resorption and eventually arthritis of the AC joint.

Provocative Tests

1. When pulling down on the shoulder, if there is a separation of the AC joint the clavicle will rise and a bump will be seen in the area of the joint. Sometimes this is demonstrated by adding weights and comparing both sides. 2. The cross body adduction test can be done by bringing the shoulder across the body. This squeezes the acromion



and clavicle together causing pain directly in the area of the joint if an AC joint separation or arthritis is present.

RADIOGRAPHS

The acromioclavicular joint is best evaluated using the Zanca view radiograph.

- Acromioclavicular Joint Radiography – Zanca View

Direction of the x-Ray Beam: The beam is directed with cephalad angle of 15°. 50% penetration.

- Acromioclavicular Joint - Zanca View

Clavicular Osteolysis can be assessed using the Zanca View. The acromion will be normal with the abnormality isolated to the distal clavicle.

RADIOGRAPHS

- Zanca view is also used for diagnosis of arthritis of the AC joint. It can show osteophytes and joint space narrowing.

The patient's symptoms may not correlate with the x-ray findings.

MRI: Increased signal and edema in AC joint.

Osteonecrosis, AVN of the Talus

The blood supply of the talus is very limited and unique. This creates the risk of osteonecrosis with fractures of the talar neck. Osteonecrosis is death of a segment of bone that interrupts the blood supply. The artery of the tarsal canal is the dominant blood supply.

The deltoid branch of the posterior tibial artery is the only remaining blood supply with displaced fractures.

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Talar neck fractures are classified into four types: Hawkin's Classification: Type I – Non-displaced and 10% AVN; Type II – Fracture with subtalar dislocation or subluxation and 50% AVN;

Type III – Fracture with subtalar and tibiotalar dislocation or subluxation and up to 90% AVN; Type IV – Fracture with subtalar and tibiotalar dislocation and talonavicular subluxation and up to 100% AVN. The fracture is usually reduced and fixed with the patient followed up clinically and radiologically for healing of the fracture and the development of avascular necrosis. The status of talar vascularity can be checked by the Hawkin's sign, which aids in AVN diagnosis.

What is the Hawkin's sign? The Hawkin's sign is a subchondral osteopenia (lucency) seen at six to eight weeks on the mortise view x-ray of the ankle on the dome of the talus. Look for the radiolucent line below the subchondral bone. The radiolucent line is more commonly seen on the medial side of the mortise view. The

Hawkin's sign is a good indication of intact vascularity with resorption of the subchondral bone following fracture of the talar neck. It is 100% sensitive and 58% specific. Its absence does not rule out intact vascularity. Once the fracture heals, begin weight bearing. Restricting weight bearing beyond that which is needed for healing of the fracture does not decrease the risk of osteonecrosis. At 3-6 months post operatively, AVN can be seen on the plan x-ray as sclerosis.

An MRI is sensitive for detecting AVN as it shows decreased signal on T1, but it does not guide the treatment. In MRI studies, titanium implants have better visualization than stainless steel.

Osteonecrosis does not usually involve the entire talar body.

TREATMENT: 1. Conservative treatment; 2. Surgical (Tibiotalar fusion-ankle fusion). In case of excessive osteonecrosis, Tibiocalcaneal fusion or Blair fusion may be useful.

Medial Collateral Ligament, MCL Injuries:

The medial collateral ligament is one of four major ligaments of the knee (MCL, LCL, PCL & ACL). Posterior Cruciate Ligament – PCL; Anterior Cruciate Ligament - ACL; Lateral Cruciate Ligament (LCL).

The medial collateral ligament extends from the medial epicondyle of the femur to below the medial condyle of the tibia. The MCL is a static stabilizer composed of superficial (primary) and deep (secondary) portions that are restraints to valgus stress.

•SUPERFICIAL MCL

–Primary restraint to valgus stress.

•PROXIMAL ATTACHMENT

– Posterior aspect of medial femoral condyle.

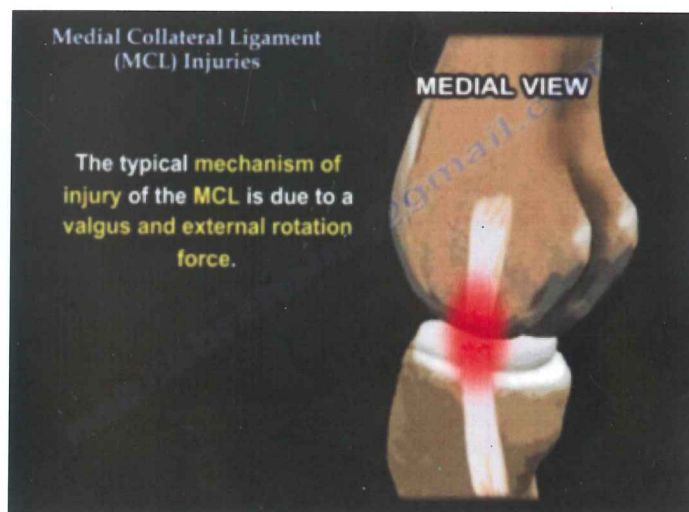
•DISTAL ATTACHMENT

– Metaphyseal region of the tibia, about 5 cm distal to the joint, lying beneath the pes anserinus.

•DEEP MCL:

– Secondary restraints to valgus stress; – Inserts directly into edge of tibial plateau and meniscus; – May be separated from the superficial layer by a bursa.

The joined tendons of the sartorius, gracilis, and semitendinosus muscles cross on top of the lower part of the MCL. The pes anserine bursa is located anterior to the insertion of the medial collateral ligament into the tibia. The MCL's primary function is to be a restraint to valgus stress. The MCL is the most commonly injured ligament of the knee. The typical mechanism of injury of the MCL is due to a valgus and external rotation force. A direct blow to the knee usually causes complete rupture of the MCL. Rupture may occur proximally or distally. Tears of the proximal MCL have a greater healing rate. Tears of the distal MCL may not heal well (similar to Stener lesion of the thumb).



ASSOCIATED CONDITIONS: 1. ACL Tears -Injury to the ACL comprise up to 95% of associated injuries. Rupture of the ACL causes anterolateral rotatory instability. The majority of MCL injuries that are associated with ACL injuries are Grade III complete ruptures, no end point with valgus stress at 30° and 0° of knee flexion. 2. Meniscal Tears – Up to 5% of isolated MCL injuries are associated with meniscal tears. Not a common injury.

CLASSIFICATION OF MCL SPRAINS: Grade I –Sprain, stretch injury. Grade II–Partial tear of MCL. Grade III –Complete tear of the ligament.–no end point with valgus stress at 30° of knee flexion.

PRESENTATION: History – “Pop” sensation; SYMPTOMS – Pain and tenderness usually higher than the joint line. PHYSICAL EXAM Tenderness along medial aspect of knee.–Ecchymosis–Knee effusion.

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Medial Collateral Ligament Injuries continued

Testing for MCL Injury: –Positive valgus stress test at 30° of knee flexion indicates injury to the superficial MCL. –Opening around 1 cm indicates a Grade III complete tear of MCL. –Positive valgus stress test at 0° of knee extension indicates posteromedial capsule or cruciate ligament injury in addition to MCL injury (means combined injury). –Always evaluate for other injuries (ACL, PCL, or medial meniscal tear).

IMAGING: Pellegrini -Stieda Syndrome – Radiographs are usually normal; however, may show calcification at the medial femoral site (Pellegrini – Stieda Syndrome). – Calcification due to chronic MCL deficiency at the medial femoral insertion site.

RADIOGRAPHS: Pediatric patient with a knee injury and suspected salter fracture should get stress views x-ray to rule out a growth plate injury. Growth plates are weaker than ligaments (may use MRI instead of stress views).

MRI: MRI is the study of choice as it identifies the location and extent of the MCL injury.

TREATMENT: 1. NSAIDS, 2. Rest, 3. Therapy (–Minor sprain of the MCL will require therapy with return to play in about a week. –May use a brace if injury is Grade II; return to play in about 2-4 weeks. –With Grade III injury, return to play in about 6-8 weeks). SURGERY: 1. Surgery in Grade III injuries with multiple ligament injury, especially with distal avulsion fracture; 2. If there is chronic instability with opening in full extension, do reconstruction; 3. Additional arthroscopy may be needed to rule out associated injuries.

In combined MCL and ACL injuries, usually surgery for the ACL is delayed until the MCL heals (up to eight weeks). Use an ACL brace.

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