

FROZEN SHOULDER

By C Sabin Cranford, M.D.

Frozen shoulder, or adhesive capsulitis, is one of the most common disorders of the shoulder joint. Yet, it is poorly understood. It is a condition of uncertain cause characterized by the spontaneous onset of pain with significant restriction of both active and passive range of motion. Typically, it is a self-limiting condition lasting 1-3 years, yet between 15-50% of patients may have persistent symptoms.

The causes of adhesive capsulitis are usually divided into three categories. Primary adhesive capsulitis is without a known cause. Secondary adhesive capsulitis is due to a known disorder. This can be either systemic (diabetes, hypothyroid, hyperthyroid, hypoadrenalism), extrinsic (cervical disease, CVA, cardiopulmonary disease), or

intrinsic (rotator cuff tendinitis, rotator cuff tears, biceps tendonitis, AC arthritis). Tertiary adhesive capsulitis is developed after shoulder surgery or after a shoulder fracture.

The exact pathology behind the development of adhesive capsulitis is unknown. The end result is that the shoulder capsule becomes thickened and noncompliant. The contracted capsule does not allow the normal free motion of the shoulder which leads to excessive movement by the scapula.

Patients typically complain of pain and an inability to do normal daily tasks. On history, they may relate an injury or one of the above mentioned systemic disorders. On examination, the patient will have loss of both

passive and active range of motion. A good documentation of the degrees of elevation and abduction is important in tracking the patients progress. Internal rotation, or reaching behind the back, is usually the last motion to return.

Standard x-rays should be taken to eliminate fractures or

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DR CRANFORD

SHOE ALLERGIES & DERMATITIS

By Sanford M. Chesler, D.P.M.

Shoe dermatitis presents as either an allergic reaction or a skin irritant. 3-12 % of all contact dermatitis (ACD) is attributed to footwear. The chemicals used in footwear manufacturing plus the warm moist occlusive environment worn shoes provide potentiates shoe dermatitis.

Multiple skin testing studies of affected people have shown almost 50% had a polysensitivity to shoe dermatitis allergens.

The causative allergens in shoe dermatitis are the glues (34%), leather tan-

ning chemicals (26%), and foot powder (30%). The leading chemical is butylphenol formaldehyde resin (27%)

Differential diagnosis for shoe dermatitis is mechanical irritant dermatitis, juvenile plantar dermatitis, latex allergy, atopic dermatitis, tinea pedis, endogenous foot dermatitis, pustular psoriasis and lichen planus.

Symptoms range from a mild, itchy rash to severe itching, swelling and small blisters. In severe cases the skin disruptions become

secondarily infected. The sited of the dermatitis is usually in the forefoot and extensor surfaces. Interdigital areas from thong spacers are common with sandal wearers.

Diagnostic skin testing is recommended if shoe allergy is suspected. KOH-fungal testing if tinea pedis and biopsy may be helpful.

Immediate treatment with soothing Borrows' solution compresses, topical steroid creams and prednisone burst is usually sufficient. Long term treatment is avoidance of the antigen.

ANKLE INSTABILITY

BY DR MICHAEL HAYMAN

Ankle sprains are among the most common sports injuries seen by primary care physicians. Approximately 20% of these sprains have residual complaints related to their initial injury. Common reasons for these residual problems include peroneal tendon tears or subluxation, osteochondral fractures of the talus or lateral process fractures.

Once these causes have been eliminated a large proportion to the remaining symptomatic patients will have continued complaints due to laxity of the ankle joint. These complaints are considered broadly under the heading of ankle instability.

Ankle instability can be subdivided into two categories: functional instability and mechanical instability.

Functional instability is related to pain as the cause for the ankle giving way. Mechanical instability is the loss of the integrity of the static restraining structures which anatomically hold the ankle in its correct position. This loss of integrity may be due to weakness or to an actual disruption of these restraints. Ankle instability can also be related to subtalar instability.

Patients with mechanical instability will often report numerous prior episodes of ankle sprains, with pain free periods between these episodes. They are typically tender over the anterior talofibular ligament and to a lesser extent over the calcaneofibular ligament.

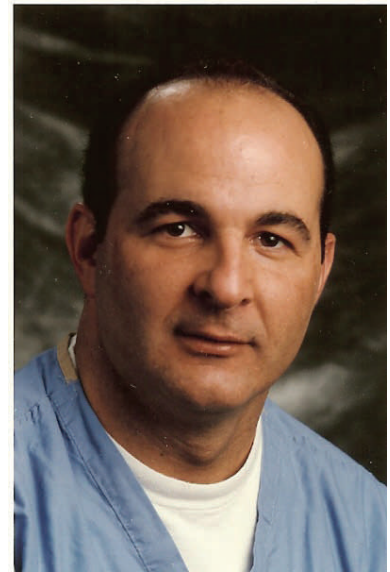
Currently, stress radiographs comparing the involved to the uninvolved ankle offer the best diagnostic value in helping to assess for mechanical instability. These should evaluate for talar tilt as well as for abnormal anterior talar translation.

Acute ankle sprains should be treated with the RICE (rest, ice, compression and elevation). This should be followed with gradual increases in weight bearing and physical therapy.

The mainstay of treatment for chronic mechanical instability should always be physical therapy for peroneal strengthening and proprioceptive training. Somewhere in the neighborhood of 25% of residual symptoms of ankle sprains are directly related to peroneal weakness. Most of these patients will find resolution of their symptoms with

higher intensity physical therapy which is directed at the peroneal weakness.

For those who continue to have symptoms despite vigorous directed rehabilitation, surgical intervention becomes an option. These surgeries center on attempts at anatomic type reconstructions at present. These anatomic reconstructions have superior outcomes over the nonanatomic reconstruction which were often performed in the past. The advent of suture anchors and the use of autograft and allograft material is helping in the advancement of these techniques.



DR HAYMAN

WHAT'S NEW ON THE WEB AT AOFS

Arizona Orthopedic and Fracture Surgeons has updated their web site. The Site, WWW.arizonaorthopedic.com, will have up-to-date information pertaining to patient care, patient registration, appointment availability and new patient information forms. These forms and information are downloadable and will expedite the initial and subsequent patient visits. There will be links to the American Association of Orthopedic Surgeons which provide educational material covering orthopedic and podiatric conditions.

WOUND HEALING BY SANFORD M. CHESLER, D.P.M.

INDIRECT WOUND HEALING

The treatment of open wounds cannot just be the direct intervention of wound care specialists and their bag of tricks and potions. Wound care must include the “whole patient” concept of patient care. Therefore, each provider of wound care must realize the patient’s wound is connected to a body which interacts with its environment, its social system of support, and its mental and physical overall health.

Lets go through a few wound care patient scenarios to see what indirect influences may affect the progress of healing a patient’s wounds.

A 28 year old female was learning how to snowboard. She lost control of her snowboard and crashed into a tree. She sustained a deep contusion to her lower leg and the resulting expansive pressure of the hematoma caused necrosis of the skin. She presented to a wound center where an initial debridement of the necrosis yielded a significant open wound (see insert). During the initial workup she underwent vascular testing which was negative for DVT or vascular insufficiency. She had no physical or mental limitations.

Her indirect factors in wound healing were minimal and consisted only in difficulty getting time off work to make her wound healing appointments. After complete healing she was able to return to all activities with no sequellae from

the injury. No post healing measures were necessary for rehabilitation back into her environment.

The second scenario is an elderly female patient who fell in her apartment after loosing her balance. She sustained contusions and skin tears. She was seen in the wound service and the patient medical history revealed abnormal social and cardiovascular histories. Her laboratory and vascular studies showed mal-nutrition, PVD and anemia. Her physical exam, including gait evaluation, indicated muscle wasting and weakness leading to loss of proprioception and balance. She lived alone and had to manage stairs to enter her home. She has no family members in town and few friends with the ability to help her on a daily basis.

The indirect wound healing management extends beyond the wound care specialist and staff. We utilized the following specialized services in order to facility her wound healing and prevention of recurrence.

A vascular surgeon for evaluation of the decreased perfusion to her legs.

A nutritionist/physician to evaluate her anemia and malnutrition.

A occupational therapist to evaluate and advise changes to her living environments and quarters for safety and ADL limitations.

A physical therapist and podiatrist to help evaluate and treat her muscle weakness and improve balance.

A social worker to help with her support systems.

This patient responded well to these interventions. She no longer falls or show signs of weakness. She is now living in an independent living facility with minimal assistance.

It is important not to tunnel vision our treatment of wounds. We should not pigeon-hole patients due to age, gender or social standing. We need to utilize all ancillary and professional services when we assess the “whole patient”.



Without a drain, the flap failed



The wound after debridement

FROZEN SHOULDER - continued

severe osteoarthritis as the cause of the loss of motion. An MRI may also be helpful to diagnose any other soft tissue pathology of the shoulder (i.e. rotator cuff tear or tendonitis). MRI for the diagnosis of adhesive capsulitis is occasionally diagnostic if the interpreter is able to identify a thickened capsule.

Conservative treatment is usually effective in the management of adhesive capsulitis. The first goal is pain control. NSAIDs are usually effective and help with the inflammatory nature of this condition. I typically

avoid narcotics due to the duration of this condition and the possibility of dependency.

In patients who have a secondary diagnosis such as rotator cuff tear, it is important to first treat the adhesive capsulitis. As an adjunct to oral medications, an intraarticular steroid injection is usually very effective at pain control and improving motion. I typically have this done by a radiologist under x-ray guidance. I don’t believe that in office subacromial injections are as effective, as the issue is the shoulder capsule.

A few days to a week after they receive the

injection, I have patients start formal physical therapy. They should be instructed to go three times a week, and return for repeat evaluation in six weeks. If at that point they still have no improvement in symptoms, I repeat the injection and renew the physical therapy.

Operative treatment is usually reserved for patients who have not improved after 6 months of conservative treatment. This includes a combination of manipulation under anesthesia combined with a capsular release.



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SPORTS MEDICINE ORTHOPEDICS

Arizona Orthopedic and Fracture Surgeons expanded its orthopedic sub specialty services by opening a sports medicine clinic in each of our treatment facilities. Drs Hayman and Cranford, Fellowship trained in Orthopedic Sports Medicine, will head this multi-specialty service which include podiatric sports medicine and biomechanics lead by Dr Sanford M. Chesler, D.P.M.

Dr Cranford and Dr Hayman received their sports medicine training in Boston, Massachusetts. They worked as team physicians for The Boston Celtics, Harvard University, Tufts University and Northeastern University sports medicine programs

Dr Chesler has been practicing podiatric biomechanics and podiatric medicine for 33 years including 7 years as team podiatrist for the United States Air Force Academy (AFA) sports programs and cadet training. While at AFA he revamped the footwear program and sports safety programs.

GRETA LUDWIG, PA-C JOINS AOFS

Greta was born in McNary, Arizona and has lived in Arizona most of her life. She received her Bachelor's degree in cell biology and physiology for Arizona State University and Physician Assistant certification from Wake Forest University in Winston Salem, North Carolina.

She returned to Arizona and worked at Barrows Neurology Group in neuro-oncology. After two years she transferred to Arizona center for neurosurgery working in outpatient clinics and surgical assistant.

Greta joined Arizona Orthopedic and Fracture Surgeons 6 months ago working primarily in the new Glendale office. This position has offered her an excellent diversity of experiences as she works with all the orthopedists and our podiatrist.

In her free time, Greta enjoys reading, listening to music, working out, baking

and sewing. She states "I am a rabid sports fan of college and professional football and baseball".



Greta Ludwig