

Nutritional Section

Edited by Dr. A. J. Dysert, Cedar Springs, Mich.

This section is devoted to the problems of chiropractic nutrition. It is conducted by Dr. A. J. Dysert, Chairman of the Committee on Nutrition of the MSCS.

ARM AND SHOULDER PAIN

Dr. Geo. J. Goodheart, Jr.

Shoulder pain may arise (1) in the supraspinatus, in infraspinatus and in the subdeltoid bursae (2) in the muscles and tendons about the shoulder (3) in the acromio-clavicular joint (4) by reflex from tissues at the base of the neck and upper thorax including the cervical nerve-roots (5) by reflex upwards from the nerve sheaths in the arm and the elbow.

Pain arising in the structures that form and control the shoulder joint may be felt at a distance only. Pains which, in fact, often arise at the shoulder joint may be felt most intensely at the lower deltoid area or in the arm just above the elbow. Occasionally the symptoms are ascribed to the forearm or even the wrists. The pains may entirely omit the shoulder region and often radiate to the hand. Identical pains may arise from different lesions, the same lesions may at different times give rise to pain at different sites. No matter what the position of the trouble, if it's severe, the patient often complains of a deep burning ache running down the arm and forearm. The patient has little idea of its source.

To deal with the difficulties with the shoulder joint is, indeed, a difficult task but, on a percentage basis, the most frequently met condition in the average patient is a bursitis of either the subdeltoid or the infraspinatus tendon. Witness the often-found calcification found in the tendon and compare its appearance to that of another found condition, calculi in the renal pelvis or possibly in the bladder. The same conditions occur and develop which allow calcification. In a general way, it has been our observation that calcium will precipitate out of the bloodstream and out of the tissues while in its colloidal state and precipitate into a calcareous deposit only when the reaction of the tissues becomes of a greater alkalinity and can be tolerated by the patient's acid base equilibrium. Frequently the patient will complain of "bursitis" and, just as frequently, we may find the condition to be neuritis or some other common condition, but, in true bursitis we must find a calcareous deposit. Occasionally, the calcium is in a state of precipitation where it is visible and simple X-rays generally do not suffice because frequently the deposit is situated in such a way that it will not become immediately visible if one takes the simple AP view of the shoulder.

It has been our practice when the patient complains of symptoms referable to the shoulder, to perform a fluoroscopic examination of the patient's motion pattern about the shoulder and instruct the patient with the arm hanging loosely at the side to put the arm into extreme supination very slowly and then into extreme pronation very slowly and observe the shoulder joint carefully

for any signs of a calcareous deposit. Frequently there will be a calcareous deposit behind the greater tuberosity of the humerus and unless there is some change in the position of the humerus, one is apt to miss the calcareous deposit which lies quite often just beneath the floor of the bursa or possibly at its posterior area.

Frequently we see calcareous deposits in the supraspinatus tendon close to the greater tuberosity and sometimes in the subscapular and infraspinatus tendon. The cause of the deposit is undoubtedly related to blood supply rather than any change in toxemia or infection but primarily we feel changes in the acid-alkaline balance directly relate to the precipitation of the calcium deposit vis-a-vis the most frequently found calcium deposit in the kidney or in the ureter forming when the urine maintains at a highly alkaline level.

Now for the purposes of explanation, it is assumed that reader recognizes that not *all* kidney stones are formed of basically an alkaline urine calcareous deposit. But, in the main, this the pattern and we feel, a similar situation occurs in the shoulder, in the shoulder bursae and treatment designed to acidify the tissues frequently is of great value in reducing, first, the period of disability the patient has and, second, in completely clearing the calcium deposit in the bursa and without any vigorous regime or unnecessary or unusual dietary or physical therapy methods, even though these may be efficacious.

The following technique has been found useful and practical in the management of an acute bursitis. The patient is seen and the diagnosis has been made as to the presence of a calcific bursitis. He is given immobilization by an adhesive strapping on the shoulder in such a way that the arms lifted up to take the strain off the bursa depending on the location of the bursa which can be established by fluoroscopy, or by simple observation. The direction of the pressure pull of the tape is determined by the relief or by the observation of where the bursa is located. Any existing lesions are removed. Frequently associated with this bursitis we find a sacro-iliac condition on the same side causing a great deal of muscle pull.

Frequently there is a subluxation of the acromio-clavicular joint, but because of the extreme pain that these patients complain of, any work about the shoulder is generally deferred until such time as the patient can tolerate manipulation of the shoulder.

He is given directions to take one A & C tablet, one E tablet hourly, with one tablet of acid calcium 4 times daily. This acid calcium allows, first, a diffusion of the calcareous deposit by pre-

senting the tissues with a normally acceptable form of acid calcium.

It is our view that in the light of the so frequently observed calcium deficiency of the modern urban dweller that the paradoxical calcareous deposit in the shoulder in the presence of a calcium deficiency requires explanation. Frequently the patient is calcium deficient on a dietary intake or on a metabolic pattern. This calcium deficiency quite frequently causes a pull of the bony reserves of calcium to maintain the blood calcium phosphorus ratio and although this effort of the body to provide a calcium phosphorus ratio which will be acceptable to the blood does suffice, the bony calcium which is derived from the bone is usually not acceptable by the tissue when it is needed and frequently this calcium is then deposited as a waste product in some hard-working joint or bursa in a vain effort of the body to over-protect some critical area of muscle bone friction. This will explain the position of the deposit in the bursa and it would also explain the frequent presence of olecranon bursitis or bursitis of other areas which we find quite often.

After the patient has been given the A & C, the E and the acid calcium product with directions to take the A & C and the E one hourly and directions to take the acid calcium until he begins to yawn—if he is taking 3-a-day, then cut to 2—if he is taking 2-a-day, cut to 1, if yawning supervenes. Yawning generally represents the effort of the body to shift into an acid pattern. This allows dissolving of the calcium deposit and as the calcium deposit reduces or diffuses into the tissue, there is much, much less pain. This generally takes between 24-48 hours. The patient is instructed to expect a relief within 24-48 hours and X-ray evidence invariably will show a dissolution of the calcium deposit within a week if he maintains this schedule. X-rays before and after are an excellent media to prove your point on the modus operandi of, first, the calcium deposit and, second, the ability of your therapy to relieve it.

We must frequently find the second cervical, the third cervical and fifth cervical subluxated to the inferior on the right in these bursitis cases. This seems to occur regardless of the side of the bursitis and adjusting with the patient's tolerance to receive it yields good results. It has been our observation once the adjustment has been accomplished to withhold any further adjusting until such time as it can be definitely proven that there is a disturbance in the position of the previously mentioned segments.

Muscles and Tendons About The Shoulder

The most frequently met condition in pain referred to the shoulder is a slipped bicipital tendon. This slipped bicipital tendon generally is complained of by the patient in his inability to place his hand in his hip pocket. Frequently he has difficulty in raising his arm past the horizontal until he's reached a certain point. Then, the raising of the arm past the horizontal becomes a little more easily accomplished. Slipped bicipital tendon frequently follows trauma. The biceps has two heads—one has its origin from the top of the coracoid process and the other from the upper lip of the glenoid fossa. It's the biceps head which has its origin on the upper lip of the glenoid fossa which we are concerned with. The head of the biceps slips from the groove over the humerus (from the bicipital groove of the humerus) and immediately causes an automatic shortening of this

biceps tendon which then interferes with the accidental reduction back in position. This causes subsequent pain, swelling, and much disability. The therapy is simple. The arm is allowed to hang loosely at the side, the elbow is flexed so the forearm is at right angles to the floor, a steady lateral (rarely medial) pressure is exerted on the slipped bicipital head and the elbow is pushed straight posterior hugging the patient's thorax until the limit of motion is reached. Continuing the lateral rarely medial pressure on the bicipital tendon, the elbow is then taken away from the chest, brought out forward and returned to its previous position. A slipping back of the tendon into the bicipital groove of the humerus should be observed. When this is accomplished, it may require repetition. Following the reduction of a slipped bicipital tendon, traction taping to hold the slipped bicipital tendon into its position is recommended. Efforts made to elongate the muscle by carrying heavy weights, massage of the insertion at the bicipital tuberosity of the radius is recommended as well as other forms of physiotherapy, but the main element is to reduce the slipped bicipital tendon. This constitutes the most frequently found condition of the muscle and tendons about the shoulder joint.

One should not forget the fact that the *teres major* and the *subscapulus* as well as the *infraspinatus* are capable of contracting in a cramped fashion and causing a posterior rotation of the humerus which in turn sets up the compensatory contraction of the *pectoralis major* causing difficulty in movement of the shoulder. Manipulation heavy, deep, of the origin and insertion of the *teres*, the *subscapularis* and the *infraspinatus* are productive of much good results along with secondary manipulation of the origin and insertions of the *pectoralis major*. The *coraco-brachialis* very seldom enters into the shoulder joint conditions as this is not a very powerful muscle. The *latissimus dorsi* is frequently involved in shoulder joint conditions and it is wise to always examine the status of the pelvic girdle and the *sacro-iliac* joint as well as the *sacro-lumbar* joint and carefully reduce conditions here. The previous article on disc lesions would accord an excellent method of investigating this area.

Acromio-Clavicular Joint

Disturbances of the acromio-clavicular joint, which is basically the butt joint between the coracoid process of the scapula and the distal end of the clavicle can be classified as lesions which cause a separation of the acromio-clavicular joint or an approximation of the acromio-clavicular joint. Generally, if the shoulder joint, (the acromio-clavicular joint), is separated the patient carries his arm away from his body. Generally if the patient has an approximation of the acromio-clavicular joint, he carries his arm near the body. Manipulation to reduce this is directed to the scapula and, since the scapula floats free on the posterior thorax, a steady pressure designed to either open up or reduce the acromio-clavicular joint is all that is needed many times. Pressure applied on the scapula diagonally inferior on the *superspinatus* ridge along with simultaneous headward pressure at the lower margin of scapula will generally allow an approximation of the previously separated joint to occur if one holds it long enough—approximately 4 to 5 minutes.

The opposite is true if in the case of an approximation of the acromio-clavicular joint if a medio diagonal pressure is held below the *supraspinatus* ridge in a medial diagonal pressure exerted be-

low the supraspinatus ridge along with a separating pressure on either the coracoid process or the clavicular border will suffice to cause a normal separation of the acromio-clavicular joint.

Taping to insure either approximation or separation of the joint is seldom necessary, but in difficult cases this is occasionally recommended. Severe tearing of the acromio-clavicular joint heals slowly and surgery is frequently recommended in a severe tear.

Reflexes From Tissues About The Base Of The Neck, Including The Cervical Nerve-Roots

A. A. O. combination lesions produces much brachial pain and frequently disturbances in cervical two, cervical three and cervical five produce referred pain in the arm and shoulder and can easily be reduced by attention to these particular segments. Reflexes from various viscera produce pain in the brachial plexus and most frequently met are digestive visceral reflexes. The gall bladder, the stomach, are the most frequently indicted and attention to gall bladder and gastric reflexes and gall bladder and gastric function in terms of nutritional support will aid in the reduction of any painful process arising from these areas and having a referral point in the shoulder and arm. Your attention is directed to the usual techniques of treating reflex pain, such as thumb web areas, foot areas and belly reflexes.

Reflexes Upward From Nerve Sheaths In The Arm And In The Elbow

The most commonly met condition which causes referred pain to the shoulder and to the upper arm is a separation of the radical ulnar joint. This is generally caused by a fall or some trauma which is experienced when the wrist is held in extreme extension with weight being born upon the extended joint.

The separation of the radial ulnar joint produces what is called the carpal tunnel syndrome and nerve pressure is exerted because of the traction exerted upon the carpal ligaments producing pressure by traction. The reduction of the separation between the radius and the ulnar at the wrist joint is the therapy of choice to reduce the referred pain. Frequently the pain is referred to the elbow or to the biceps area. Reduction and maintenance of the reduction by proper adhesive strapping or the wearing of a leather wrist band is productive of good results.

Changes in the elbow joint are also productive of pain referable to the arm and the shoulder and the elbow joint generally requires a pronation extension to realign the humerus to the radius and ulna. This is a relatively simple maneuver in which the arm is flexed, carried into moderate pronation and then with pressure exerted upon the acromio process, the arm is brought into full extension and mild pronation. Generally a palpable click is heard with the great reduction.

Occasionally in children, more often than adults, the radius can enter into a pronation or supination pattern. There is generally an occurrence of heavy traction with pronation or supination being exerted at the same time with the radius head slipping out at the time supination or pronation is produced. Flexion with the thumb on the head of the radius and then mild extension along with pronation or supination, depending on the pattern involved, frequently causes a reduction of the moderate subluxation of the

head of the radius with the subsequent reduction in pain.

As was previously mentioned, this occurs much more often in children than in adults but it does occur and it is frequently a cause of referred pain both to the arm, to the shoulder, and to the wrist.

It is hoped that this brief survey of conditions in and about the shoulder joint may prove useful and practical. The main points primarily being proper diagnosis, proper therapy, with proper nutrition.

In the case of bursitis, the use of A & C, E, and an acid calcium product is essential for the dissolution of the calcareous deposit and the reduction of the muscle and tendon disturbances.

We have frequently found that Vitamin E Complex and manganese B₁₂ combinations are of great value in chronic dislocations as is also the case in acromio-clavicular joint separations and in reflex disturbances in the shoulder joint. Attention to both gall bladder and stomach function in terms of nutrition, is practical and useful with the use of appropriate A, F, and possibly Betaine products for the liver and gall bladder along with other lipotropics and attention to the hydrochloric acid level either reduction or increasing depending upon results of simple tests for gastric function. Diagnex (Squibb)

In neuritis associated with fatigue B complex is indicated, in alkalosis association acid calcium and phosphorus compounds are needed. Shock doses of E complex occasionally are required in syndromus following excessive use of synthetic fats.

This article is published as a service by the Research and Nutrition Committee of the Michigan State Chiropractic Society.

A&C means Vitamin A&C Complexes
CY1711-13*

E tablet means Vitamin E Complex
CY1715*

Acid Calcium means CAL-AMO Tablets**

Manganese-B₁₂ means Manganese-
Phytate B₁₂**

B Complex means Vitamin B Complex
CY1712*

A&F means Vitamin A&F with Betafood
CY1711-16-27*

Betaine means Betaine Hydrochloride**

* ~~Therapeutic Food~~
* ~~Therapeutic Food~~