Non - Articular Rheumatism

By W. A. McDONALD SCOTT
M.B., Ch.B.(Aberd), M.R.C.P.(Lond.)

When Shakespeare in Midsummer Night's Dream said:

"The north-east wind —
Awak'd the sleepie rheume, and so by chance
Did grace our hollow parting with a teare",

he was saying as much as was known about rheumatism three hundred and fifty years ago.

We can add little more today in spite of massive advances in the whole field of medicine, although in the "climatron" of the University of Pennsylvania, "weather" can be arranged by adjustments of temperature, humidity, air electricity and barometric pressure: in this way patients with rheumatic disease under double-blind conditions were found to have worsening of their symptoms with "a change in the weather front".

Non-articular rheumatism covers a wide range of aches and pains felt in the soft tissues but not associated with arthritis. The muscles and fibrous structures of the body may be affected by postural strain, by excessive use, by psychological or climatic stress and by physical injury. This leads to pain, tenderness and stiffness with associated muscle spasm in many. The precise pathology of these conditions remains obscure.

Fibrositis or muscular rheumatism is probably the commonest of all forms. It is called psychogenic rheumatism in America, suggesting that psychological stress is always a cause, which is difficult to prove. If we consider rheumatism as an expression of the result of stress on a particular temperament — the "rheumaticy" type — those whose musculoskeletal system represents a target organ in that individual — then there must be a psychological component, at least.

In such a person there is often a history from childhood, starting with "growing pains" and continuing through adolescence and adult life with episodes of rheumatic nature.

The diagnosing of non-articular rheumatism must be tempered with caution, but in the face of obvious good general health, a normal blood sedimentation rate, a normal or raised serum uric acid and negative Latex screening test for rheumatoid arthritis, it is reasonable to make it.

Although there are several reasonably clear-cut syndromes, soft-tissue rheumatism is more easily reviewed region by region.

NECK

The diffuse aching pain of rheumatism is difficult to localise and this has been checked experimentally with hypertonic saline.

Each spinal segment has a characteristic referral area. An injection into the neck at C_2 will produce aching in the back of the neck and head radiating often to the forehead. At C_4, pain is felt in the side of the neck. At C_5, pain is felt in the side of the neck and the point of the shoulder. At C_6, pain tends to spread down the outer side of the arm. At C_7 and T_1, pain spreads down the inner side of the arm. In all these areas, the skin and superficial muscles are tender to touch and spots normally sensitive to pressure become especially so. This is the common picture of fibrositis of neck and shoulders — the word that incorrectly suggests an inflammatory state.

The "nodules" are muscle bundles which can be felt, and their dispersal suggests the relief of spasm of these bundles.

LOW BACK PAIN (Lumbago, Sciatica, "Slipped Disc")

Acute episodes against a background of a "bad back" are perhaps the commonest of all the problems of non-articular rheumatism. Although the great majority are for practical purposes musculo-skeletal the possibility of underlying pathology must be remembered. Physical, laboratory and radiological investigations should be kept to a minimum and response to therapy used as confirmation of diagnosis.

It is rare to find the absence of psychological factors, the most important being a loss of confidence in the back which helps to perpetuate symptoms. A mythology has grown up about the "slipped disc" and the inevitability of trouble if there is radiological evidence of degenerate discs. It seems that the reduction in size of the shock absorber between two vertebral bodies is considered critical in the production of pain and yet the most modern treatment of discolysis produces chemical destruction of the disc with relief of pain. Unless there is mechanical pressure on nerve roots or spinal cord by displacement of the disc, the reduction of size is unimportant.

Treatment of the patient as a personality combined with treatment of trigger points in the back will often produce regression of symptoms and gradual rehabilitation.

In general, the support of a corset or similar appliance without positive forms of therapy can be ineffectual and extremely uncomfortable in a hot climate.

UPPER LIMB

The painful shoulder, a common feature of rheumatoid arthritis, is even more common as an expression of non-

---

Congenital Talipes (*continued from page 5*)

Conclusion

Congenital talipes equino-varus is a serious foot deformity, and requires prolonged and strenuous treatment. It is often very difficult to correct adequately, and may show a vicious tendency to relapse throughout growth.

However, with early gentle manipulation and continuous splinting, soft tissue release as young as three months of age, and constant after-care until growth has ceased, a satisfactory but never normal foot can be obtained.

REFERENCES

Browne, Denis: Talipes equino-varus. Lancet II, 969, 1934.
Browne, Denis: Modern Methods of Treatment of the Club foot. British Medical Journal, 2, 570, 1937.
Browne, Denis: Splinting for Controlled Movement. Reprinted from Clinical Orthopaedics, No. 8, 1956.
Dwyer, F. C.: Treatment of Relapsed Club Foot by the Insertion of a wedge into the Calcaneum. Journal of Bone & Joint Surgery, 45B, 67, 1963.
Ponseti, D.: Relapsed Club Foot. Journal of Bone & Joint Surgery, 43B, 722, 1961.
Fripp, A. T.: Problem of Relapsed Club Foot. Journal of Bone & Joint Surgery, 43B, 626, 1961.
Kite, J. H.: Treatment of Congenital Club Feet. Journal of American Medical Association, 99-2, 1156, 1932.
Kite, J. H.: Principles Involved in the Treatment of Congenital Club foot. Journal of Bone & Joint Surgery, 21, 595, 1939.
Kite, J. H.: Treatment of Congenital Club feet. Offprint from American Academy of Orthopaedic Surgeons. Instructional Course Lectures, Vol. V 1948.
Kuhlmann, R. F., & Bell, J. F.: Clinical Evaluation of Operative Procedures for Congenital Talipes Equino-varus. Journal of Bone & Joint Surgery, 39A, 265, 1957.
Singer, M.: Tibialis posterior transfer in Congenital Club Foot. Journal of Bone & Joint Surgery, 43B, 717, 1961.
Singer, M., & Fripp, A. T.: Tibialis anterior transfer in Congenital Club foot. Journal of Bone & Joint Surgery, 40B, 252, 1958.
Southwood, R. T.: South Australian Clinics, No. 4 Vol. 5, 1971.
Wiley, A. M.: An Anatomical & Experimental Study of Muscle Growth. Journal of Bone & Joint Surgery, 41B, 821, 1959.

articular rheumatism. As a joint, the range of movement is greater than in any other in the body and the variety of disturbances equally great. Generally there is pain combined with a degree of impaired movement or action. Most commonly the symptoms arise from the periarticular structures and there are four main syndromes:

(1) Subacromial bursitis, associated occasionally with calcareous tendinitis.
(2) Adhesive capsulitis.
(3) Bicipital tenosynovitis.
(4) Musculo-tendinous cuff lesions.

Subacromial bursitis may present dramatically with severe pain when calcific deposits rupture, but more commonly produces a constant ache associated with a painful arc. Pain on abduction, may be localised at the tip of the shoulder by pressure on the supraspinatus tendon.

The persistent pain of "tennis elbow" with its characteristic point of tenderness near the radial head is extremely common. The modern concept of the "enthesis", the junctional point of muscle or tendon and bone, where there are many nerve endings, has offered a clearer picture of this and similar conditions. The medical syndrome of "golfer's elbow" is less common, but equally persistent.

The carpal tunnel syndrome seen typically in middle-aged women is a common cause of pain, often severe and worse at night. The pain may radiate into the whole arm from the hand. Neurological signs are infrequent and if present relate to the median nerve. De Quervain's disease or tenosynovitis of the long extensor of thumb produces pain in the wrist and forearm and there may be visible swelling. Resistance to extension of the thumb reproduces the pain. In both syndromes — carpal tunnel and De Quervain's — the possibility of underlying rheumatoid arthritis should be considered.

LOWER LIMB

Most causes of soft tissue rheumatism in the lower limb are associated with conditions in the lumbar spine and sacro-iliac joints. Referred pain may misleadingly suggest knee or hip-joint disease.

Bursitis related to the ischial tuberosities and greater trochanter of the femur, may produce pain locally.

Strains of ligaments at the knee joint commonly produce pain and obesity is a factor in many of these patients.

There is one problem in the obese which can be extremely difficult to handle — the panniculities of medical fat pads.

Pain in the legs on walking may appear to be rheumatic when the real cause is ischaemic disease, and absent or inadequate pulses will clarify the picture.

The painful foot may be associated with poor muscles, postural faults and bad footwear, singly or in association.

Metatarsalgia is common in later life: it is due to flattening of the exterior arch with painful callosities beneath the heads of the 2nd and 3rd metatarsals. Hallux valgus is also present in most cases.

Pain in the heel can be remarkably disabling. Plantar fasciitis is the usual cause and may be associated with rheumatoid arthritis, ankylosing spondylitis or Reiter's disease. Most commonly however it is a local condition probably due to long-term trauma. The plantar spur on the calcaneous is frequently found but surgical removal is rarely necessary.

In South Africa, the high incidence of hyperuricaemia as a result of metabolic anomalies increases the likelihood of rheumatic reaction presumably because of the added irritation of uric acid crystals or urate sludge to the provocative stress. It is important to establish this before physiotherapy has been initiated, as the response to such therapy is commonly poor.

MANAGEMENT OF NON-ARTICULAR RHEUMATISM

The management depends critically on adequate reassurance combined with physical treatment depending on the condition.

The local instillation of local anaesthetic combined with a steroid is the most effective short-term measure. Physiotherapy is extremely important but the burden carried by departments would be tremendously lightened by greater use by doctors of the direct approach mentioned. The use of analgesics is advisable but the stronger anti-inflammatory analgesic drugs should be avoided in view of their possibly serious side effects.

In a tense, wrought-up person, the use of a muscle relaxant — Diazepam or Chlordiazepoxide — may be as effective as an analgesic and more comforting.

The incidence of non-articular rheumatism will remain high, but the disability which is associated with it could be reduced by greater awareness of the provocative factors and by the use of physical methods in addition to drug therapy.

Non - Articular Rheumatism

The place of Physiotherapy

by S. H. M. BLACKWOOD
M.C.S.P. Dip T.P.

Non-articular rheumatism is a convenient term for all those aches and pains which cannot be placed in a specific category, and yet a precise diagnosis is essential for their satisfactory management. Fortunately this responsibility does not rest with the physiotherapist, and the purpose of this paper is to discuss the role of Physiotherapy and its application in the treatment of non-articular disorders. The most logical way to consider these is on topo-graphical basis because this is the way in which patients present e.g. "I have a pain in my shoulder." Symptoms may be of local origin, referred from a more central site, or manifestations of a generalised connective tissue disorder. Whatever the origin pain arises from a lesion, therefore treatment should reach the lesion and should exert a beneficial effect on the lesion. Patients are individuals, therefore treatment which is beneficial to one may achieve nothing in another or even make symptoms worse in a third. Often a combination of techniques proves the most beneficial.

Non-articular means all soft tissue structures in the body i.e. muscles, tendons, ligaments, bursae, connective tissue. The first treatment is of great importance. On this occasion rapport must be established between patient and physiotherapist, time must be given to taking a good history and giving a thorough examination and initial assessment on which treatment may be based. This cannot be rushed, it is frequently the first treatment which is the crucial factor in the outcome of the patients progress.

THE SHOULDER

In the normal process of ageing the major impact usually falls on the structure of which sustains the greatest stress. In the case of the shoulder this is the rotator cuff. Pain is often referred to the outer aspect of the upper arm and treatment should be directed to the whole shoulder area. Short Wave Diathermy and Infra Red Rays are useful analgesics and can be applied with any technique that the physiotherapist finds gives the patient most comfort. In some cases heat in any form may aggravate symptoms as may also the application of ice — either may be found to be beneficial. Ultra-Sound, especially pulsed Ultra-Sound seems to help, possibly by reducing residual inflammatory exudate. It is probable that the most effective part of any treatment is that involving the physiotherapist's hands by the use of massage or the mobilising and manipulative techniques. Bicipital tendinitis for example

responds very well to deep frictions over the site of pain, maintained for as long as the patient is able to tolerate it, and to accessory mobilisations of the shoulder joint. Range of movement should be maintained, but not increased, by the practice of exercise by the patient. These should be controlled isometric exercises in the first instance, carefully progressing over a long period. Vigorous unguarded exercises performed too early may prove retrogressive and necessitate a period of complete rest for the joint. Great patience must be observed by both physiotherapist and patient in the management of any disorder in the region of the shoulder joint. Capsulitis of the shoulder, the true "frozen shoulder" has a natural history of its own, the duration of which cannot be forecast with certainty and treatment is symptomatic and palliative. Any lesion in the region of the shoulder may produce symptoms in the neck and it is advisable to include the cervical spine in the treatment programme.

THE ELBOW

The most common lesion at the elbow is a tendinitis either the origin of the extensor muscles of the forearm at the lateral epicondyle of the humerus or the origin of the flexor group from the medial epicondyle — "tennis" and "golfers" elbow respectively. In the acute phase some form of heat and ultra sound give relief. Deep frictions across the tendon afford massage analgesia, and thin out scar tissue. Manipulation, if skilfully performed, may give good results. More than 4-6 treatments should not be given. If symptoms have not responded in this time the patient should be referred back to the specialist for hydrocortisone injection. There is more than one type of both tennis and golfers elbow and an accurate diagnosis is essential for good results. Operation may be required.

THE WRIST AND HAND

Tenosynovitis is most commonly associated with an underlying condition such as rheumatoid disease but may occur spontaneously due to overuse. Deep transverse frictions, rolling the tendon sheath to-and-fro over the tendon serves to smooth the gliding surfaces and can have dramatic results. Ultra-Sound may reduce thickening in the tendon sheath and Short Wave Diathermy is a good analgesic.

Carpal tunnel syndrome in its earliest stages when swelling might seem to be reversible may respond very well to treatment with Ultra-Sound and Shortwave Diathermy. Where there is no reasonable chance of resolution, surgical decompression is indicated and physiotherapy is directed postoperatively to regaining full function of the hand.

THE LOWER LIMB

Patients may present with pain in hip, knee or foot, and not only in tendinous areas in relation to the joints but also in the bulk of strong muscles such as Gastrocnemius, Hamstrings, of Quadriceps. Pain of rheumatic origin seems on the whole to respond best to some form of heat. Deep frictions across tendon or ligament or the fibres of muscle belly seem to mobilise and free adhesions. In very tender areas Ultra-Sound brings relief. Mobilising and manipulative techniques performed on the knee or the forefoot may give dramatic relief in a few moments. Manual stretching of soft structures relieves tension in connective tissue.

THE BACK AND NECK

Each forms a vast subject on its own and cannot be dealt with in detail here. Extremely careful initial examination and assessment of the patient as a whole is a necessity. Radiographs should be asked for and scrutinised before treatment of any drastic nature is given. Untold damage may be caused by ill-advised traction or clumsy manipulations. Where traction is concerned, especially of the neck, it is advisable to feel the way by applying normal traction in the first instance, so as to assess the reaction of the patient and the tension of muscles and ligaments. Soothing effleurage and firm kneading help both in general relaxation of the patient and in the localised areas being treated. Graded mobilising techniques release tensions in ligaments and connective tissue and deep frictions "iron out" nodules in muscle. Once a degree of relaxation has been achieved discreet manipulations may be performed. Any pain or bruising inflicted by these movements may be relieved by the use of Ultra-Sound, some form of heat of ice. It is advisable to give traction while there is still tension in the muscles so that their protective function is present. Stretching in itself will produce relaxation.

In conclusion it must be mentioned that in dealing with the patient suffering from non-articular disorders a number of related contributory factors should be taken into consideration. For example personal relationships and possible dissatisfaction at work; mechanical stress such as repetitive factory work which puts constant strain on one joint or limb; postural stress such as the incorrect height of a typists chair in relation to the typewriter; psychological and emotional stresses such as a feeling of inadequacy at work or insecurity at home. Advice can be given on the overcoming of some of these stressed, especially the mechanical ones. Many of these patients are in sedentary or repetitive occupations and should be encouraged to participate in some form of sport; take part in group excercises, such as yoga; or simply to take regular exercise at home in the form of running specific exercises aimed at the disorder, or recreational activity such as gardening.

SUMMARY

Almost any form of palliative treatment may be used by the physiotherapist to induce a state of relaxation in the patient and in the part to be treated. This seems to be a matter of individual choice dependent on the physiotherapist's experience and the patient's preference. The most important part of any treatment is that which reaches and has a beneficial effect on the lesion.

It seems that in a large majority of cases this is the use of the physiotherapist's hands in giving a good deep massage, especially localised frictions in mobilising with accurate techniques and careful grading; and in controlled manipulations.

To All Members
S.A.S.P.

Please remember to
send in your completed
Questionnaires
Before
March 31st 1975.