A NOTE ON THE DIAGNOSIS AND TREATMENT OF CHRONIC RHEUMATIC DISEASES IN SOLDIERS.

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There is no doubt that chronic rheumatic diseases present a serious problem in military medicine just as they do in civil practice.

In the first place, medical officers often find that they have difficulty in deciding on the exact diagnosis, on the significance of symptoms and on the proper treatment and disposal of their patients.

In the second place, aches and pains are vague symptoms which are easily simulated and exaggerated and the serious view which may quite rightly be taken of certain patients complaining of such symptoms encourages others less robust in their attitude towards their military duties to hope that, if their complaints are loud enough, an equally serious view will be taken in their own case.

In the third place, treatment is prolonged and unless persistently and consistently carried out is likely to be disappointing. This leads to prolonged hospitalization of patients with considerable detriment to their morale, whether their future is in the Service or in civil life, and causes unnecessary expenditure of public funds.

It is of course impossible to cover the whole field of "rheumatism," its diagnosis and treatment in an annotation such as this but an attempt has been made to summarize the main points in as few words as possible. In order to do this it has been necessary to be somewhat dogmatic and quote principles that will apply to the majority but not all cases. Moreover, the suggestions on length and type of treatment and disposal of cases apply to the Services at war and some may not be applicable in peace time whether in civil life or not.

ARTHRITIS.

Rheumatoid Arthritis.

This condition is uncommon in the Army but will no doubt be met with occasionally in young soldiers.

Diagnosis.—The points to be noted in early diagnosis are:

1. Symmetrical swelling, pain and tenderness especially of small joints, phalangeal and metacarpo-phalangeal, wrist and knee.
2. Considerable constitutional disturbance sometimes with mild pyrexia.
3. Marked increase in sedimentation rate.
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(4) Blood changes if present are anaemia and an Ameth shift to left.

(5) Osteoporosis and muscular wasting in general (X-ray of hand is the best indication of this).

Treatment.—This must be in hospital. Rest, feeding and fresh air are main considerations in early weeks. Specific treatment, including gold and removal of any foci of infection discovered, should only be undertaken on the advice of a physician experienced in the treatment of rheumatic diseases. In the majority of cases where gold is indicated the patient should not be retained in the Service. General progress will best be indicated by the sedimentation rate. Only very conservative hydrotherapy or physiotherapy are indicated in the early stages. Correct orthopaedic positions of joints must be maintained, if necessary by plaster.

Disposal.—As this is a prolonged progressive disease, with early improvement only too often a temporary remission, these patients should be submitted for Board, with a recommendation for invaliding from the Army, directly the diagnosis is certain and the patient is reasonably fit to leave hospital.

In order to ensure continued treatment if invalided from the Army efforts should be made to supply information to the patient's civilian doctor.

Toxic Arthritis.

This condition which will tend to occur in the older soldier may simulate rheumatoid arthritis very closely but is associated with a definite focus of infection.

Diagnosis.—(1) Swelling, pain and tenderness in any joint not necessarily symmetrical.

(2) Constitutional disturbance as a rule is not marked and pyrexia uncommon. When sepsis is severe however constitutional disturbance may be considerable.

(3) Sedimentation rate may be increased or normal.

(4) There may be leucocytosis; otherwise blood picture is generally normal.

(5) Osteoporosis and muscular wasting if present are confined to the region of the infected joint.

Treatment.—(1) Removal of septic focus. Care must be taken if general condition is poor, e.g. teeth removed one at a time.

(2) Rest and counter-irritation of affected joints. When swelling, pain and tenderness have subsided physiotherapy will be required to restore muscular function and mobility of joints.

Hydrotherapy may be very useful for this purpose but in the Service it is not justifiable to continue this treatment in a special hospital for more than three weeks.
Disposal.—After three weeks general treatment and physiotherapy or hydrotherapy at a special hospital the patient should not need to be invalided from the Army but he will probably have to be regraded owing to liability of previously infected joints to flare up under serious strain. Some may be fit for immediate return to units but most should be sent to convalescent depot for hardening and testing as to capacity.

Gonorrhœal Arthritis.

This condition is difficult to diagnose and is probably less uncommon than is generally supposed. The main point is the establishment of a history of gonorrhœa which may be difficult since arthritis often follows very mild attacks. Where suspected, prostatic massage with careful pathological examination of expressed material should be practised. Since concealment of venereal disease is a crime in the Army, in the absence of history of infection and treatment care should be taken in recording a diagnosis of gonorrhœal arthritis and probably in all such cases the diagnosis should have a ? attached since recent infection cannot be proved and diagnosis is only inferential however probable.

Diagnosis.—(1) After a polyarticular migratory phase the condition is often localized to one joint, the commonest being knee, carpus, tarsus and sternoclavicular. The joint is red, very tender and swollen.

(2) General constitutional disturbance is uncommon and pyrexia may be present.

(3) Tenosynovitis is frequently present.

(4) No marked osteoporosis.

(5) Gout should be remembered in differential diagnosis.

Treatment.—Hyperpyrexia is much the most promising treatment.

Disposal.—Although treatment may be fairly prolonged most patients should eventually be fit for return to unit or regrading to lower category.

Other Forms of Infective Arthritis.

It should be remembered that arthritis may be met with in association with scarlet fever, dysentery, typhoid, purpura and haemophilia, but these forms do not require treatment other than that of the accompanying disease, except in the later stages when physiotherapy and/or hydrotherapy may be useful under the same conditions as are referred to under Toxic Arthritis.

Osteoarthritis.

True disabling osteoarthritis must be very rare indeed within the age limits of military service except after severe injury. Mild and even moderate lipping of vertebral margins and ossification of muscle and tendon attachments are not responsible for osteoarthritic pain and should never be diagnosed as osteoarthritis. Any disability present, where such is shown
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in X-ray photographs, is due to fibrositis and should be diagnosed and treated as such.

Osteoarthritis if present and producing pain is a degenerative progressive condition characterized by local areas of osteoporosis with compensatory hypertrophy and thickening of bone. Cartilage may be denuded with consequent narrowing of joint interval but there is no true ankylosis. The hip-joint is much the commonest site of this disease.

When the diagnosis is definitely established such patients should be submitted to a Medical Board with a recommendation for invaliding from the Army. Since there is no danger to life and treatment is very prolonged this should not be undertaken in military hospitals.

Fibrositis:

This is the commonest chronic rheumatic disease in the Army and is difficult because, unless the medical officer has had considerable experience of the condition and has taken the trouble to study the objective indications, the criteria appear to be wholly subjective and therefore doubt may be felt as to when a patient is genuine, when he exaggerates symptoms or even deliberately malingers. That much Service time is unnecessarily lost by soldiers labelled with this disability is unquestionable.

**Diagnosis.**—(1) The patient complains of pain, stiffness and tenderness in certain places.

(2) If the patient is placed in such a position that the muscle involved is fully relaxed and the tender spots can be palpated against subjacent bone hard fibrous nodules and bands can often be felt. Nodules can be found which are not tender and these indicate previous attacks of fibrositis but are not significant for the present attack. The constancy of the location of the tender spot on successive examinations is significant of genuine disability.

Pain is not always localized at the tender nodule since it may be "referred" in accordance with the distribution described by Lewis and Kellgren (British Medical Journal 1938, 1, 324).

It is often possible to elicit pain by stretching the muscle either by active or passive movement so as to pull upon the tender nodule. Constancy of this finding is significant of a genuine disability.

(3) Subcutaneous tissue, intramuscular trabeculae, fascia, tendon junctions to muscle or bone, periarticular and perineural tissue may all be involved in the fibrositic process.

(4) There is no appreciable disturbance of general health except after very prolonged pain, no pyrexia, no change in blood count or sedimentation rate.

(5) There is no bony change or abnormal X-ray appearance though bony lipping may suggest a condition of muscular strain favourable to fibrositic development.

**Treatment.**—(1) The acute pain may be dramatically relieved by injection
of local anaesthetic (Novutox) into the tender spot. Failure to achieve even temporary relief if care is taken to inject in the right fascial layer and into the true origin of the pain (Kellgren's spots) makes it unlikely that the diagnosis of fibrositis is correct and, if no other cause of pain be discovered, e.g. referred pain from visceral disease, herpes zoster, etc., then the genuine nature of the patient's subjective complaint should be suspect.

Sometimes this treatment suffices to clear up the attack which may not recur for months or years.

(2) More commonly, although the acute pain is removed, aching and stiffness persist. In such cases physiotherapy (massage and heat) or spa treatment if skilfully carried out and for a restricted time does a great deal of good.

When the acute stage is past patients should be examined and a careful note made of the location of pain and tenderness and range of movement if any given movement is restricted.

He may then be sent to a specialist hospital for rheumatic diseases with strict instructions that he be returned to the Military Hospital after a period of not more than three weeks.

A further examination should then be made comparing the condition with the notes of the previous examination.

Disposal.—If the medical officer is satisfied that only slight improvement has ensued and that the disability is really genuine the patient should be referred to a Medical Board with a recommendation for regrading. This should only be necessary in a small number of cases and that in elderly soldiers.

Otherwise the patient should be returned to his unit and further complaints of pain and stiffness strictly discouraged.

Cases of fibrositis do not seem to do well at the Convalescent Depot and are better returned to the unit.

N.B.—Most "Anterior Crural Neuritis," "Brachial Neuritis," "Pleurodynia," "Intercostal Neuritis," are examples of fibrositis in the neighbourhood of a nerve but these may require more conservative treatment.

Sciatica.

True sciatica is an uncommon but serious condition. Milder forms chiefly depend on fibrositis of the intragluteal fascia and the fascia over the sacroiliac joints and should be treated as such. Extra care is however needed in choosing the stage at which massage, etc., should be applied. In the latter cases manipulation may be very useful if followed by adequate after-treatment. It should be remembered that sciatic pain may be due to reference from disease of the rectum, prostate or other pelvic organs. Sciatica due to prolapsed nucleus pulposus and sacralization (formation of false fibrous joint) of the 5th lumbar transverse process does occur but is in the nature of a medical curiosity.
Diagnosis.—(1) Acute pain referred in the course of the great sciatic nerve.
(2) Tenderness over the sciatic notch, below the gluteal fold, over the neck of the fibula.
(3) Pain on flexing the extended leg on the trunk.
(4) Diminution or loss of the ankle-jerk.
(5) In severe cases objective anesthesia and muscular wasting occur.

Treatment.—The initial treatment of all cases of true sciatica should be rest in bed with or without a back splint or plaster until severe subjective pain has disappeared for a week.

Treatment by gentle massage should then be recommended and if tolerated the patient may be sent to a hospital specializing in the treatment of rheumatic diseases for three weeks.

Disposal.—Careful note should be made of location and degree of tenderness, of the average angle to which the extended leg can be flexed on the trunk without eliciting pain on three separate occasions and the state of the ankle-jerks before and after the spa treatment. If definite improvement has taken place further treatment either at a spa hospital or by physiotherapy elsewhere may be advised. A severe attack of sciatica usually takes at least three months to recover. In any case the patient should be referred to a Board with recommendation for regrading.

If no appreciable improvement has taken place on the second examination the patient should be recommended for invaliding from the Army since he will neither be able to stand the strain of marching nor standing nor of sitting except on a special chair.

Gout.

Though not common amongst soldiers this condition is sometimes missed.

Diagnosis.—Gout should only be diagnosed if at least two of four criteria are present.

(1) A localized red shiny exquisitely painful swelling in the region of a joint. The joint affected will be one subject to strain or minor trauma hence the common seat of election in the 1st metatarso-phalangeal joint.

(2) An increase in the blood uric acid. In early cases the absence of this even on the first days of the attack does not exclude gout but a positive finding is quite conclusive.

(3) A raised sedimentation rate.

(4) The presence of tophaceous deposits in bone, cartilage, bursae or sometimes in subcutaneous tissues. X-ray appearances if present are almost pathognomonic with pinched out areas in the neighbourhood of joints, though similar small lesions are occasionally found in cases of rheumatoid arthritis.

Treatment.—(1) In the acute stages 10 to 30 minims of vin. colchici with
alkali should be given four-hourly till severe pain has subsided. Aspirin is a useful adjuvant.

(2) Rest to the joint with mild counter-irritation as the inflammation subsides.

(3) Hydrotherapy; especially vapour baths, and plenty of mineral water to drink for three weeks only.

(4) Light diet with plenty of fluids and a minimum of fats and purins. The bowels should always be kept well open.

(5) If blood uric acid is still increased after the attack subsides Atophan up to 10 grains t.d.s. for four days each week for six weeks according to level of blood uric acid increase may be indicated on specialist’s advice. It should be remembered however that Atophan is a dangerous drug and a safe and reasonably effective alternative is salicylate in 30-grain doses t.d.s. with alkali.

Disposal.—In any case the patient should be referred to a Board with recommendation for regrading, after recovery of early attacks, since undue strain will almost certainly cause a flare up. If several attacks have already occurred the patient should be recommended for discharge from the Army.

N.B.—Gout is almost always associated with fibrositis which will require treatment. Chronic gout if recurrent in the same joint will usually lead to osteoarthritic changes in that joint.