RHEUMATISM IN THE ARMY AND THE RATIONAL CAMPAIGN AGAINST IT.

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The problem of rheumatism in the Army differs somewhat from that of rheumatism in civilian life. In the Army soldiers do work of practically the same type under the same climatic and environmental conditions. The age groups are balanced to youngsters and adults and there are hardly any old soldiers. On the other hand in civilian life are two main groups, the manual labourer and the office employee, and there is large divergence in ages and conditions of housing and feeding. In the Army the men are usually a good healthy type, they are continually under medical supervision and consequently diseases if any can be diagnosed at an early stage. It should be remembered that there is the possibility of conscious or subconscious simulation of diseases. The problem has also to be looked at from a financial standpoint in the event of soldiers being invalided out of the Service with such conditions as rheumatic heart or chronic joint conditions which render the invalid unable to take up civilian work. Acute rheumatic fever does not represent difficulty in diagnosis. The high temperature, periarticular change in the form of swelling and redness of the skin over the affected joints and the general condition of the patient, complete the picture and are sure indications that the patient should be in hospital. More difficulty may be met with in cases of subacute rheumatic fever, in which the rise of temperature may be small and not continual, so that, at the moment of examination, there may be a normal temperature. The articular changes are not very marked, there may be no periarticular swelling and no redness of the skin over the affected joints. The diagnosis in fact is based entirely on subjective symptoms such as history of joint pains. Such cases are often not diagnosed correctly. A mistaken diagnosis in such cases may be of great import and even lead to serious consequences. The intensity of the rheumatic infection cannot be judged from the intensity of the objective or general signs. Rheumatic fever is not a joint disease but a general disease which attacks more often the central circulatory system, i.e. the heart, in the form of endo-myo-pericarditis and sometimes even a pancarditis; mostly endo- and myocarditis together. Not infrequently the conducting system of the heart is involved. Quite frequently we find rheumatism as exclusively a heart condition without the involvement of the joints. This occurs mostly in young individuals, rarely over 25 years of age. In these cases the early diagnosis of rheumatic heart disease is of primary importance, especially from the point of view of prognosis. In these instances very often the signs and symptoms, especially at an early stage of
the disease, are not very marked. They may simply be fatigue, slight weakness and tachycardia. Such signs and symptoms may easily be attributed by an inexperienced medical officer to the new conditions of service to which a recruit has not been accustomed before. In such cases, if we have the slightest suspicion, we may make a correct diagnosis after a few days' observation in a detained ward. If possible a sedimentation rate test should be made, also a total white and differential blood-count. In every case an accelerated sedimentation rate (S.R.) is sufficient indication for further observation. Where an acceleration of the S.R. is found and rheumatism suspected, further investigations are indicated such as X-ray electrocardiography.

More rarely we meet cases of chronic joint inflammation, rheumatoid arthritis. This disease presents some difficulty in early diagnosis because the early symptoms may not be very marked, they may present themselves in the form of vague pains in the small joints of fingers, toes, wrists, elbows, knees, etc. Sometimes there are small periarticular swellings of joints without redness of the skin and without any rise of temperature. There are no heart symptoms beyond some tachycardia. The liability to miss the diagnosis with consequent serious results for prognosis and treatment is very evident.

Osteoarthrosis, usually called in this country osteoarthritis, nearly always affects the big joints, the hips, knees and shoulders, and is mostly unilateral. This disease is hardly ever met with during the normal age of the soldier and, if found, the arthrotic changes are so small that they do not interfere with normal duties. When osteoarthrosis is suspected and bone changes discovered after physical examination, and possibly confirmed by X-rays, the question arises whether such changes are likely to interfere with the soldier's future efficiency. We meet sometimes cases in which there is great disproportion between the subjective and the objective symptoms. While some patients complain of much pain and discomfort they present on examination very little arthrotic change and limitation of joint movements while others do not suffer any pain and very little discomfort but are found on physical examination to have a certain degree of limitation of movement with considerable arthrotic change on X-ray examination. Osteoarthrosis is a local disease and the condition of the affected joint is the only deciding factor as to efficiency for military service.

Another disease which may be met with is spondylitis ankylopoietica (spondylitis adolescens). This is a very chronic disease of the rheumatic type which affects the joints of the vertebral column and is fortunately comparatively rare. The early symptoms are rather vague and polymorphic. They may present themselves as insidious intercostal neuralgia or sciatica or intermittent myalgia, which on careful examination is found to be secondary to a primary spondylitis ankylopoietica. If this disease is diagnosed, the individual should be rejected as unfit for military service, as spondylitis ankylopoietica is a progressive disease affecting the intervertebral
and the costo-vertebral joints with subsequent interference with thoracic movements. Not infrequently they are in the form Pierre-Marie-Strümpell (spondylorhizomélique) the large joints such as the hips or shoulders, being involved.

The remarks made above in respect of osteoarthrosis regarding liability for military service apply also to spondyloarthrosis deformans in a greater degree, because here we find marked and widespread hypertrophic changes which are not limited to one vertebra alone. The subjective symptoms may be nil. The X-ray picture may present considerable lipping of the vertebral bodies which will not be considered of great pathological importance unless an inflammatory process is also present. The differential diagnosis can be arrived at by careful observation, white blood-count, differential count, and especially S.R. An accelerated S.R. is always indicative of an inflammatory process in such cases.

Acute muscular rheumatism may be generalized or localized. Most often it is found in the neck muscles (torticollis rheumatica) and the lumbar region (lumbago) but also in the muscles of the thorax (pleurodynia). Chronic muscular rheumatism is doubted by many authors and the large number of terms used to describe it, fibrositis, panniculitis, cellulitis, cellulalgia adiposalgia, etc., go to show that not even the locality of the pathological process is agreed upon. Chronic muscular rheumatism per se is of small import as regards military service except that it must be borne in mind that this condition may be a secondary symptom to a primary organic cause, such as new growths of bones, inflammatory conditions of bones, arthritic changes in the intervertebral joints or even ureteric calculi.

Of great importance on account of frequency are the rheumatic conditions of nerves, especially the sciatic nerve. Sciatica may be acute or chronic and may be neuralgia or neuritis of the sciatic nerve. In neuritis we find, beside the pains, trophic changes, disturbances of sensibility and abolition of tendon jerks. Sciatica may be radicular, funicular or peripheral and according to the locality of the morbid process the symptoms may be different. In acute sciatica marked by severe neuralgic pains, sometimes with inability to walk, the patient should immediately be admitted to hospital. In chronic sciatica symptoms are very polymorphic, varying from slight temporary pains to permanent disability. In severe cases patients should be admitted to hospital so that accurate diagnosis may be made as to whether the condition is an essential sciatica or a symptomatic condition (ischialgia) secondary to malignant disease, hypertrophy of prostate, spondylitis adolescens, etc. For a long time sciatica has been known as one of the diseases that a malingerer is likely to copy. The knowledge of objective symptoms, such as the symptom of Laségue, coupled with a history of pain, by a would-be patient is very likely to deceive the examining medical officer in view of the fact that, in sciatica, blood changes are not marked, the S.R. is usually normal, the X-ray rather indefinite and it is difficult to discover a simulator. A very careful examination of all the movements of the affected side compared
to the healthy will usually enable the physician to distinguish the true disease and a faked one. The non-rheumatic joint affections, chronic and acute, of the infectious diseases, such as measles, influenza, undulant fever as well as gonorrhoea, syphilis and tuberculosis, do not represent special problems of diagnosis and treatment.

The problem of simulation and aggravation of disease is a very serious one. The largest number of malingerers complain of rheumatism (pains) especially of muscles and nerves. The knowledge of this fact may sometimes lead us to suspect simulation where true disease exists. Such a mistake is very grave from the patient’s point of view as, in such cases, the disease remains untreated, and takes on a chronic character making the individual a permanent cripple.

Rheumatism as a social problem was first recognized after the Ministry of Health Report, published by H.M. Stationery Office in 1924, "The Incidence of Rheumatic Diseases." Other countries in Europe and North and South Americas also recognized these diseases as a social problem. The large increase of rheumatic cases cannot be explained entirely by the fact that they are better diagnosed but may, perhaps, be attributed to conditions of warfare during the world war of 1914-18. Damp trenches, bad housing in barracks, bad clothing and food, all of these are predisposing factors to rheumatic diseases. Keeping in mind the crippling effect of these diseases, especially acute rheumatic fever with subsequent cardiac involvement, and chronic articular rheumatism with its lasting joint conditions, it will be realized how important it is that this problem should be recognized. Such recognition may save large sums of money which would otherwise have to be paid in disability pensions. In the present state of our knowledge of rheumatic diseases we are not in a position to take very effective prophylactic measures, such as might reduce to a minimum the incidence of these diseases. Our hope lies therefore in combating the condition in its early stages. I suggest firstly that rheumatic cases should be centralized under the care of specialists (rheumatologists). Medical officers in charge of units should send rheumatic cases to these special hospitals at once. At these hospitals careful examination should be made and a correct diagnosis arrived at. In cases of acute rheumatic fever the condition and function of the heart should be carefully noted.

The patients should not be discharged from hospital too early. The complete disappearance of such general symptoms as pain and joint swellings should not be regarded as a complete cure of the patient because frequently the morbid process goes on without any signs or symptoms. The deciding factor should be the sedimentation rate. The patient should not be discharged as cured until the S.R. comes down to normal, 5 to 7 mm. Westergren. When the S.R. has been normal at least twice in a week the patient may be sent to a convalescent home for three to four weeks and treated adequately. During this time of convalescence S.R. should be estimated once a week and, if it remains normal, the soldier may then be returned
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to his unit. In cases in which the heart is involved in the course of acute rheumatic fever special attention should be given to the condition. Such a state, myo- or endocardial, should be regarded as a chronic and not an acute one. In the case of endocardial involvement the subject is no longer fit for military service. On the other hand, with myocardial involvements, the patient should be kept in bed for at least six to eight weeks. The leading factors in our treatment will be the patient’s condition on physical examination and also blood examination, white cell count, differential count, S.R., the electrocardiogram and X-rays. When the patient is finally allowed to get up and to walk for a few minutes daily the heart condition should be checked by the Ekg. and the S.R. done. Return to normal life should be very slow and gradual, the patient being sent to a convalescent home after a normal S.R. and Ekg. He should stay there at least three months and his condition be controlled by physical examination, S.R. and the Ekg. In this way we may be able to cure a number of cases who will eventually be returned to their units as fit for military service. The rheumatoid arthritic cases depending on the intensity of their conditions may be sometimes able to return to duty. Cases of essential muscular rheumatism and some cases of acute sciatica are, after appropriate treatment, generally fit for military service, but cases of chronic sciatica may only be able to do light military duty.

All rheumatic patients must be kept for a considerable time on salicylates which have not only a curative but also a prophylactic action. The question of doses of sodium salicylate and other salicylic acid compounds and pyrazolon derivatives, the duration of treatment, the methods of giving the salicylates—oraly, intramuscularly or intravenously—together with the question of surgical intervention for the removal of “infectious foci,” as well as other forms of treatment, such as gold therapy, protein shock therapy of rheumatoid-arthritis, etc., constitute a chapter of medical study which requires a number of years to acquire.

Conclusions.—Having regard to the above, the problem of rheumatism as it affects the Armed Forces can be dealt with by accurate diagnosis and adequate treatment, preferably in a rheumatic hospital and at the hands of expert rheumatologists. From the results obtained in anti-rheumatic centres in peacetime I am confident that similar good results could be obtained amongst a military personnel during the present war.

Since writing this article the British Medical Journal for February 1, 1941, has published a report on the recommendations of the British Empire Rheumatism Council which are almost the same as my recommendations above.