MANAGEMENT OF RHEUMATIC DISEASE IN THE FORCES

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That the problem of rheumatic disease in the Forces is a considerable one is shown by the fact that out of 2,727 cases seen as out-patients at two military hospitals during the year ended May 1, 1942, 307 were referred because of rheumatism. That is, 1 case out of every 9 was sent up for advice on this account. Just as in peacetime this group of diseases causes great loss of industrial working hours, so, in wartime, rheumatism, though often not severe, interrupts training and disorganizes routine.

It may be of interest to analyse the various groups of cases seen and give a brief account of the treatment adopted and the method of disposal followed. This last is of importance to Service medical officers. Table I summarizes the numbers of each group of rheumatic disease and the percentages admitted to hospital either for further investigation or for treatment.

TABLE I.—Summary of Cases of Rheumatic Disease in 12 Months at a Military Hospital

Disease	No.	% of Total Rheumatic Cases	No. Admitted	% of Disease Admitted
Fibrositis	141	52.22	19	13.47
Lumbar	40	14.80	14	35
Trapezial	30	11.10	4	13
Gluteal	26	9.62	—	—
Generalized	18	6.66	—	—
Shoulder girdle	14	5.18	—	—
Intercostal	13	4.81	1	7
Postural backache	40	14.80	12	30
Sciatica	24	8.88	24	100
Osteo-arthritis	24	8.88	7	29
Ankylosing spondylitis	14	5.18	12	85
Rheumatoid arthritis	5	1.85	3	60
Osteochondritis dissecans	5	1.85	1	20
Rheumatic fever	4	1.48	4	100
Infective arthritis	4	1.48	3	75
Gonococcal arthritis	3	1.11	3	100
Sacro-iliac strain	3	1.11	3	100
Spondylolisthesis	1	0.37	1	100
Myositis ossificans	1	0.37	1	100
Gout	1	0.37	1	100
Total	270	100	94	

In 37 cases it was found on examination that there was no evidence of any rheumatic condition. These men were complaining of muscular stiffness after exercise and had labelled themselves "rheumatic" or "arthritic" quite unjustifiably; this diagnosis had been accepted by the unit M.O. Actually the pains were due to the normal physiological response to unaccustomed use of particular muscles. Such men were at an early stage of their training, and it was advised that they should be returned to duty and to normal P.T.

Of the remaining 270 cases 94 were admitted to hospital. The grounds for admission to hospital of men in the Forces suffering from rheumatic disease while they are undergoing training differ widely from the management of civilians in peacetime. Civilians should be treated as out-patients whenever possible so that they can continue to earn a living and avoid the economic anxiety which accompanies hospitalization. With patients in the Services, however, the main purpose must be to render them fit for full duty in as short a period as possible. A soldier with rheumatic disease is of no use in his unit and will usually be stationed too far from a physiotherapy department to be able to attend for daily treatment. In many cases the most rapid way to return the man to full duties is to admit him to hospital, where intensive treatment can be given. Often after a short period in hospital these men are transferred to a convalescent depot where they can continue treatment under P.T. instructors, with the supervision of the Command specialist in physical medicine.

Owing to the type of rheumatic disease encountered in the Services a large proportion can be completely cured, while in

the more chronic cases treatment will yield sufficient improvement for the man to be capable of a high degree of efficiency, though in a lower medical category.

Table II summarizes the cases admitted to hospital, their numbers, age, duration in hospital, and disposal.

TABLE II.—In-patients with Rheumatic Disease during 12 Months

Disease	No.	Average Age	Average No. of Days in Hospital	Category E
Sciatica	24	29	21	1
Lumbar fibrositis	14	31	16	—
Ankylosing spondylitis	12	28	25	—
Postural backache	12	28	16	—
Osteo-arthritis	7	40	11	7
Trapezial fibrositis	4	36	15	—
Rheumatic fever	4	25	63	—
Sacro-iliac strain	3	39	7	—
Gonococcal arthritis	3	33	18	*
Rheumatoid arthritis	3	36	38	*
Infective arthritis	3	23	29	—
Intercostal fibrositis	1	37	17	—
Osteochondritis dissecans	1	27	10	*
Spondylolisthesis	1	24	19	*
Myositis ossificans	1	37	30	1
Gout	1	26	31	*
Total	94			

* Transferred to special E.M.S. unit.

Fibrositis

This formed by far the largest group, being over 52% of the total number of rheumatic cases. The term "fibrositis" as it is usually employed means a non-articular involvement of the soft tissues, most commonly the sheaths of the muscles, the fascial layers, and other fibrous supporting tissues of the locomotor system. No direct evidence of pathology was obtained, but the changes were considered similar to those described by Stockman (1940)—that is, swelling and oedema of the affected areas with proliferation of fibroblasts and formation of new blood vessels. Later the connective-tissue cells proliferate and the area becomes more fibrous and tougher. The aetiology in nearly all the cases was thought to be traumatic, due to small muscle tears taking place during the course of training. In some cases previous industrial fibrositis had been exacerbated by training. Nearly all these men were ex-miners and were recommended for discharge on account of the strong probability of multiple recurrences. Any evidence of local sepsis was rare. In only 7 cases out of the 141, or 5%, was a focus found which might conceivably have played a part in the aetiology. Cases of fibrositis should not as a rule be admitted to hospital unless they require manipulation or intensive treatment. They should be capable of being rendered symptom-free by short periods of physiotherapy, and Army life with its regulated activities and adequate food is often good treatment for them. Lowering the man's medical category was delayed until treatment had been tried. In the majority of cases it was found to be unnecessary.

Lumbar Fibrositis (40 cases).—Fourteen of these had acute lumbago and were admitted to hospital. They were treated by strapping the back muscles longitudinally and by heat. Within a few days spinal movement was encouraged by the masseuse, and they were allowed up. At the end of a week they attended the exercise class and were given work to do in the hospital. In all cases they were returned to their units for full duty (average time 16 days). Of the men treated as out-patients the majority had minor recurrences of fibrositis which had started in civilian life. These men complained of backache intensified by exercise. On examination there was restriction of full spinal movement, with often a localized area of tenderness in the lower erector spinae muscles. Initial treatment in many cases was by local infiltration of 2% procaine. This was followed by daily heat and exercises. As soon as possible these men were put in an exercise class.

Trapezial Fibrositis (30 cases).—These men complained either of post-occipital pain and headache or of stiffness across the shoulders accentuated by wearing equipment and by drill. In 4 cases admitted for treatment the condition was of long standing and there was muscle-wasting. A localized area of tenderness could usually be palpated on the muscle sheath and the pains thus reproduced. This area was infiltrated with 2%

procaine, followed in some cases with proctocaine. Daily exercises were given afterwards.

Gluteal Fibrositis (26 cases).—It is difficult to differentiate these cases from the sciatic group as they both form part of the sciatic syndrome. They were none of them severe, and were all treated as out-patients. The complaint was of pain radiating from the buttock. On examination this could be reproduced by palpation of a localized or diffuse area, most frequently in the origin of the gluteus maximus or medius. Where localized, such an area was infiltrated with an anaesthetic. All cases were treated with heat and exercises, active and passive.

Shoulder-girdle Fibrositis (14 cases).—The symptom here was of pain radiating from the shoulder down the outer side of the arm, often to the fingers, with some pain on full movement of the joint. Deltoid wasting was present in a few. It was considered that the lesion in these cases was in the region of the subacromial bursa: either that the walls of the bursa itself had become adherent or that the bursa was stuck to the overlying deltoid or supraspinatus muscle. Joint change or calcification of the supraspinatus tendon was excluded in each case by radiography. These men were treated by local anaesthetic injected into the region of the bursa. This was followed by active exercises. In the majority one injection was sufficient.

Postural Backache ; Sciatica ; Osteo-arthritis

Postural Backache (40 cases).—This is a relatively common condition. During the early weeks of training the men report sick with backache. They have usually taken no exercise for some years, have been in light occupations, and are of poor physique. The types of posture have been recently described by Howitt and Wesson (1942): (1) forward slump with down-tilted pelvis, lordosis, kyphosis, and the head carried forwards; (2) sway back with the weight carried on the heels, pelvis horizontal, and a long lumbo-thoracic kyphosis. Spinal movement may be restricted by pain and muscle spasm. These men were all treated by remedial exercises. Those not admitted were recommended to be sent to the Army physical development centre. In 12 cases the overlying muscle spasm was so severe that the men were unable to work and were admitted to hospital. Spinal manipulation under anaesthesia was carried out and they were given remedial exercises. As soon as possible they were transferred to a convalescent depot under the Command specialist in physical medicine. These cases are in the main capable of much improvement, and if seen at an early stage can be cured. Howitt and Wesson (1942) report that 65% can be upgraded and that 50% reach category A1. If these men remain untreated they will become chronic attenders at sick parade, and it is important that this condition should be recognized as a clinical entity occurring not uncommonly in the Army to-day.

Sciatica (24 cases, all admitted to hospital).—Cases of sciatica occurring in units should be admitted to hospital as soon as possible. They need full neurological investigation and often the opinion of an orthopaedic surgeon is called for. Even where the condition runs a short course with steady improvement, full bed rest, trained nursing, and splinting are required. Physiotherapy may be necessary in the later stages. C.S.F. examination was carried out in every case where improvement was not rapid. In 5 cases it was considered that there was an intervertebral disk lesion. They were transferred to an E.M.S. neurological unit for further examination; in 3 a disk lesion was thought unlikely, and in the other 2 manipulation was performed with relief of symptoms, though the possibility of a prolapsed disk remained. In 6 cases the sciatic syndrome was regarded as due to a severe gluteal fibrositis. After a period of rest, infiltration with local anaesthetic was carried out and followed by physiotherapy. In 3 cases sciatica of long standing had proved resistant to physiotherapy elsewhere. Manipulation was followed by restoration of full function. The remaining 10 cases made slow but steady progress. They were treated by rest, splinting, and physiotherapy. When fit they were transferred to a convalescent depot for further exercises.

Osteo-arthritis (24 cases).—The localities affected were: spine 9, hips 8, knees 3, ankle 2, shoulder 1, wrist 1. In all these there was radiological evidence of joint disorganization with osteophyte formation. The average age was 40, which may be

considered low, but the younger patients had a history of either previous joint diseases—e.g., Perthes's disease—a single severe injury, or multiple microtraumata due to industrial conditions. Most of the spinal cases were in ex-miners, who were all discharged from the Service.

Other Conditions

Ankylosing Spondylitis (Marie-Strümpell Disease): 14 cases.—This is a large proportion for a disease which is counted a rarity. It occurs almost exclusively in young men, and therefore in the age group which was being examined; but, even so, it would appear from this small series that it may be a more common cause of backache than is generally recognized. Twelve of the cases were at an early stage with symptoms of under two years' duration—bilateral sacro-iliac changes in the radiograph, with no calcification of the spinal ligaments. They all had raised sedimentation rates, indicating activity. For example, a private aged 21 had played Rugby football the previous winter. For the past 6 months he had had increasing attacks of backache accentuated by long standing. He had been awakened at night by the pain. In the early stages massage gave relief. Examination produced the following information: height 6 ft. 5 in., back held rigid, lumbar curve flattened, all spinal movement restricted by pain, chest expansion only 1½ in., pain on flexion of right hip; otherwise a healthy man. Radiographs revealed bilateral erosion of the sacro-iliac joints. B.S.R. 30 mm. (Westergren). These men were transferred either to orthopaedic units in the E.M.S. or to spa hospitals. The two cases not admitted were of long standing. Radiographs showed a "bamboo spine," with calcification of the spinal ligaments and ankylosis of the sacro-iliac joints in each case. They were recommended for discharge from the Army.

Rheumatoid Arthritis (5 cases).—This is an uncommon disease in the Army. Three of the cases were in an active phase and were sent on to a spa for further treatment. The other two were inactive and had residual deformity of the hands and wrists; these men were retained in a lower category.

Osteochondritis Dissecans of the Spine (Scheuermann's Disease): 5 cases.—These men complained of backache. There was limitation of spinal movement in each case, and radiography showed typical areas of decalcification of the vertebral bodies (Schmorl's nodes). They were referred to an orthopaedic surgeon.

Rheumatic Fever (4 cases).—The average age, 25 years, of this small group is high and in each instance the attack was a primary one. All were seen at an early stage and had migratory pains, swelling and redness of the joints, with fever, tachycardia, and a high sedimentation rate. They were treated with complete bed rest until the B.S.R. returned to normal (average 63 days). When convalescent they were sent to auxiliary hospitals, being returned for check-up before going on to convalescent depots. No demonstrable cardiac complications occurred in any case.

Non-specific Infective Arthritis (4 cases).—In these men joint pain and moderate effusion were associated with a focus of infection. In 3 this was septic tonsils and in the other a dental abscess. The sedimentation rate in each case was normal. The joints subsided rapidly with rest, and the focus was removed surgically later. In one case there was a short relapse after tonsillectomy.

Gonococcal Arthritis (3 cases).—Two of these cases were early, with urethral discharge, and were transferred. The third had a history of recurrent arthritis of the ankles for over 14 years. The first attack was concurrent with gonorrhoea and there had been two reinfections since. A prostatic smear was negative. Treatment was by fever therapy, with three bouts up to 105° F. at 48-hour intervals, produced by intravenous T.A.B. The clinical result was excellent and the man was returned to duty.

Sacro-iliac Strain (3 cases).—All were traumatic in origin. The strain in each case resulted from a sudden effort to recover balance. For example, Pte. B., 5 days previously, had jumped on to a piece of wood which skidded. He made a great effort to regain his balance, and "felt something go" in the right sacro-iliac region. The pain forced him to his knees, and after walking for 10 minutes he had to go to bed. Examination

revealed pain on coughing and turning, spinal flexion limited by pain, and pelvis tilted up on the right side with scoliosis above. Lasègue's sign was present on the right side at 60 degrees, with pain in the right sacro-iliac region, and there was tenderness over the sacro-iliac joint. Radiographs disclosed no bony change. Treatment: manipulation under anaesthesia, and exercises started at once; two days later freedom from pain with full movement. All the cases were treated similarly, and each patient was returned to duty within 10 days.

Summary

All cases of rheumatism sent up to a military hospital during a year are analysed.

A brief account of their treatment and disposal is given.

The great majority of soldiers with rheumatic disease can be returned to duty as useful men.

REFERENCES

- Howitt, F., and Wesson, A. (1942). *Lancet*, 1, 373.
Stockman, R. (1940). *Ann. rheum. Dis.*, 2, 77.

PSYCHOGENIC ILLNESS IN REGIMENTAL PRACTICE

BY

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This account is based on 42 cases seen during a period of twelve months. The small number does not admit of any far-reaching conclusions being drawn, but it is hoped that the observations may be of interest in providing another view of psychogenic illness in the Army. The series differs from those described by Sutherland (1941) and Hadfield (1942) in that not all the cases were admitted to hospital or seen by the psychiatrist, and consequently the investigations were not so complete as theirs.

Owing to the small numbers a broad classification has been followed and percentages are not given. The series consisted of:

Psychoneuroses	{	Anxiety state	..	..	..	19
		Hysteria	..	..	..	21
Psychosis	..	..	..	..	..	1
Psychopathic personality	..	..	..	..	..	1

Seven cases of anxiety state and 9 of hysteria were considered to be mild reactions. The psychotic patient had endogenous depression, and the patient of psychopathic personality showed temperamental instability of the cycloid type.

Clinical Material

The cases were seen at a medical inspection room serving a large R.A.S.C. unit, one of Royal Engineers, and a detachment of the Pioneer Corps. Thus none were front-line troops. As the units varied in size, composition, and periods of attendance during the twelve months no estimate can be made of the frequency of psychogenic cases. However, it may be mentioned that in a draft of unselected recruits direct from civilian life, consisting of 19 of the 1921 class and 3 of the 1908 class, there were 2 cases of anxiety state, 1 in each age group. In a draft of 50 men of medical category below A2 there were 1 psychosis, 1 anxiety state, and 1 hysteria. Another man, not included in this series, was a stable mental defective. Most of these had had one or more transfers between arms of the Service, and they were not a normal group, being of low medical category. Also the figures are too small to be statistically valid.

The station was a market town in the South of England. No enemy action was experienced in the area during the period under review and the rest of the country was comparatively raid-free. The R.E. unit had been on bomb-disposal work during the winter of 1940-1, but had had no casualties. In no unit was the work exceptionally arduous or highly technical. The billets were satisfactory; leave was taken regularly; and the sick rate, a good index of conditions, was always low, being frequently under 1%.

Age.—The distribution of cases according to age groups is as follows:

Age Group:	20-30	30-40	40-50	50+	Total
Anxiety state	12	5	—	2	19
Hysteria	16	4	1	—	21
Psychosis	—	—	1	—	1
Psychopathic personality	—	1	—	—	1
Total	28	10	2	2	42
Normal	81	18	1	—	100

The "normal" group are the first 100 on the nominal roll of the largest unit attending. The 2 patients over 50 years of age belonged to the Pioneer Corps.

Rank.—Among those with anxiety states were 2 corporals, 1 of whom reverted to private on account of his symptoms, and 2 lance-corporals. In the group of hysterics 1 patient had held a lance stripe for several months before losing it. Only in the one case were the responsibilities of non-commissioned rank considered to play a part in the illness. The other N.C.O. patients were reported to be satisfactory in carrying out their duties.

Previous Service.—The 2 patients over 50 had served in the war of 1914-18. Neither admitted to having then had "shell shock" or D.A.H. or other psychogenic illness. Four had had previous Army service in peacetime. One with an anxiety state was invalided in 1927 with D.A.H. He said that he recovered 6 months afterwards. The precipitating factor in this war was his being torpedoed when crossing from Eire to enlist. Of 3 patients with hysteria 1 was invalided in 1936 with what now appears to have been a hysterical pain in a hernia operation scar. Specific military conditions in the present war were a factor in 2 other cases of anxiety state. One was precipitated by bombing and the other started acutely while digging for an unexploded bomb. One man with hysteria advanced "shell shock" in the evacuation from Dunkirk as the cause of his trouble, and 1 case of anxiety state began after the patient had endured several heavy air raids in London as a first-aid worker. The average length of service was 13 months before the patients reported sick with recognized psychogenic symptoms varying from 2 days to 2 years.

Symptomatology

Only the most frequently recurring symptoms are described here.

Headache.—This was the commonest symptom. It occurred in 16 cases, 15 of which were hysteria, and was the presenting symptom in 13. It was often described as "pains in the head." The headache was aching or throbbing, stabbing or constricting, or was indescribable. The character and site varied with the individual patient, but one feature was constant: it was always related to the wearing of the steel helmet, being either induced or exacerbated by this. Three patients had a possible organic basis for the headache in previous head injury. Another had mixed astigmatism, and 4 others had defective vision corrected by spectacles. In these cases the diagnosis was based on other features in addition.

Defective Vision.—This was a prominent symptom in 6 cases, including the 4 mentioned above. The characteristic feature was that the spectacles provided by the Army, re-checked by the ophthalmologist, did not improve the condition or relieve the headache and that print became blurred after a few minutes' reading. This occurred with any subject-matter, and is akin to the inability of the patients of 1914-18 to read the war news in the newspapers. In this group 4 also had night-blindness, 2 of whom claimed to have strained their eyes with night driving. (In the same period one patient with night-blindness of organic origin was seen.)

Effort Syndrome.—This symptom-complex occurred in 7 cases of anxiety state and 1 of hysteria. In 2 patients it was induced by wearing the respirator at the alert.

Dissociation Phenomena

This term is used to describe the grosser manifestations of hysteria which occurred in 5 cases.

Case 1: Loss of Consciousness with Convulsions.—This occurred in a man who had been out for the evening with some of his comrades. It was the first occasion since his return