BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 10 1939

THE PSYCHOLOGICAL FACTOR IN CHRONIC RHEUMATISM

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Chronic rheumatic diseases comprise a complex group of conditions which are very common, very disabling, and by no means easy to treat. A great deal has been written about them, but there is no unanimity yet as to their interrelationship, their pathology, or their treatment. Roughly these diseases may be divided into four main groups—rheumatoid arthritis, osteo-arthritis, fibrositis, and, standing rather apart, gout.

It is generally held that in the rheumatoid group the most important pathogenic factor is infection, probably by one or other strain of streptococcus. In the osteo-arthritis group degenerative and arteriosclerotic factors are most significant; in fibrositis infection is considered to play an important part in the younger victims, and metabolic and degenerative changes in the older subjects; while in gout there is almost certainly a hereditary factor which governs the metabolic changes that characterize the attack.

In the rheumatoid group we have a condition that many would call "true rheumatoid," in which, while infection is almost certainly of great importance, nevertheless it is difficult to determine its exact source. A few years ago great play was made with the shibboleth of focal infection, yet in a recent communication Cecil and Angevine (1938) examined 200 cases of rheumatoid arthritis and found that 70 per cent. showed no demonstrable signs of it. Treatment of such foci of infection in the remaining 30 per cent. had no beneficial effect in the great majority of cases, produced temporary benefit in a few, and occasionally caused an exacerbation of the arthritis. Yet there is a group of cases of arthritis closely allied to "true rheumatoid," often clinically indistinguishable from it, but as a rule occurring at a later age and often in men, which are indubitably closely associated with focal infection and definitely remedied, if not cured, by the removal of that focus; while the so-called specific arthritides, such as gonococcal, enteric, or dysenteric arthritis, form a series leading even to tuberculous and syphilitic joint disease, with clinical features and pathological changes not always easily distinguishable from "true rheumatoid."

Even in osteo-arthritis it is by no means certain that we can exclude infection, though most authorities would stress the importance of degenerative changes. Thus Polak (1938) says: "The existence of subacute attacks in the evolution of osteo-arthritis no longer allows us to restrict it within the narrow limits of discourse in which

many authors have confined it, on the strength of its being always non-inflammatory; we have seen that this is not so."

In fibrositis the conflicting claims of infection and metabolic changes have fought for supremacy, and if at present the balance is tipping towards the metabolic theory there is admittedly no certainty yet. As for gout, we know little more about it than did our ancestors, and the problems still requiring solution are disappointingly many. Furthermore, in the study of all forms of arthritis and rheumatism the importance of allergy (Aschoff, 1938) must not be forgotten, while dietary factors and avitaminosis must not be lost sight of (Abrams and Bauer, 1938).

It is obvious from these considerations that no one factor is going to prove responsible for the various forms of chronic rheumatic diseases, and if we turn our attention in any particular direction it must be clearly understood that the factor under discussion is only contributory to the formation of the total picture, and is in no sense to be regarded as the sole or even the major causal agency. The subject of this paper, then, is how far the result of emotional disturbance may contribute to the picture of chronic rheumatic disease. In dealing with the effects of emotional disturbance on the function of the body it is necessary to divide the effects into two groups.

The first of these consists of those changes produced through abnormal action of the autonomic system on the circulatory and secretory organs and on the tone of plain muscles. Wittkower (1935) in a comprehensive study has shown that changes occur in all sorts of organs as the result of emotional disturbance; most interesting from the present point of view are changes in respiratory exchange, urinary and sweat secretion, both quantitatively and qualitatively on circulation, on endocrine activity, and on the blood. He demonstrates that the leucocyte count can be altered as an increase or a decrease, though without change in the differential blood picture. Changes in the serum calcium, potassium, and chloride contents occur, but not, according to this author, in the blood sugar, though the latter finding would probably be disputed by others. He records experiments on guinea-pigs in which the rate of recovery from injury or infection was definitely hindered by painful or fear-producing emotional situations, while a decrease in the opsonin content is found in states of depression and painfully toned emotions. Heilig and Hoff (1925) demonstrated that it was possible in certain persons to produce

herpes labialis experimentally by hypnotic reproduction of painfully toned emotions, but when mere suggestion was given that herpes should develop the eruptions did not occur. The authors infer from their observations that a decrease in the protective forces caused by the painfully toned emotion predisposes to the development of the infection. That such effects should be readily induced is not surprising when we consider the close relation of the thalamus and its connexions with affective or emotional reactions and the fact that the hypothalamic nuclei are the "head ganglia" of the autonomic system. The tachycardia, pilomotor effects, and relaxation of sphincters associated with fear are examples of this relationship in everyday life, while the very numerous physical symptoms of anxiety states, the common psychoneurotic syndromes of train sickness, enuresis, etc., and the obstinate constipation associated with melancholia are examples in the psychopathological field.

In the second group, derangements of bodily function may be brought about by the modifications of postural tone and activity of the skeletal musculature. In everyday life these are exemplified by unconscious gestures of defence, defiance, or supplication, which may be exhibited quite without the subject's awareness when he is in the grip of strong emotion. In the psychopathological field these changes are probably based on symbolic reactions, and are illustrated by the conditions so graphically described by Halliday (1937) in which stiffness and pain were shown to be bodily expressions of such sentiments as "This gives me a pain in the neck," "I must keep a stiff back in face of this," and so on. The most marked condition of psychogenic alteration of tone and action of voluntary muscles is, of course, in the katatonia of schizophrenia, though whether this peculiar condition is due to some complicated form of symbolic expression or to some changes, presumably reversible, in the striate motor system, or both, is not yet determined.

It is clear that in relation to the first type of effect of emotional derangement we shall have to consider such derangements as being directly in the line of causation of actual chronic rheumatic conditions, presumably by the intervention of the autonomic nervous system, influencing local and general circulation and the secretion of both internally and externally secreting glands and possibly the metabolism of purines, carbohydrates, and perhaps fats. In the case of the second type, on the other hand, we shall be dealing with the unconscious simulation of chronic rheumatic conditions. Here the problem is really one of differential diagnosis, though how far a prolonged simulation may pass over into the actual condition is a question of great interest.

Hysterical Simulation of Rheumatism

My own interest in the second group was first aroused twenty years ago (Gordon, 1919) when working with Sir Arthur Hurst on cases of war hysteria. The most striking cases we then met with were those of soldiers with bent back, or camptocormia as the French called them. The following case described by Hurst (1919) was typical.

"A man of 31 who had always stooped slightly and had suffered from lumbago for twelve years developed a very severe degree of kyphosis as a result of falling out of a trap while home on leave from the front. He was treated by massage, blistering, and immobilization for two and a half months, and then by thermal baths and massage for two months, without any benefit. He was then admitted to a special hospital, where he still resisted treatment but where he was eventually cured by persuasion and suggestion by means

of a specially constructed board, on which he could be relaxed and which was gradually raised into an erect attitude."

Here no doubt, as in all hysterical manifestations, the symptom served a definite purpose—that is, in preventing his return to the front—though it should be remembered this purpose is unconscious and such patients are not malingerers. I saw and was able to treat successfully many such cases, as well as cases of pain persisting after mild acute attacks of arthritis or fibrositis in which the active condition had obviously passed off. This condition of "nervous mimicry" has long been recognized. Probably Sir James Paget (1867) was the first to draw attention to it in print; but I believe that cases are not very uncommon in present-day practice and are often overlooked, while various forms of anti-rheumatic treatment are tried in vain. In the richer classes it is probable that many of the striking successes of the osteopaths and similar unorthodox practitioners are cases of this type. More recently Halliday (1937) has drawn attention afresh to this class of patient, laying especial stress on the symbolic significance of these symptoms, showing that they are employed to express a definite mental attitude and that the symptom is often useful to the patient in allowing him to avoid a situation or duty which is irksome.

Again, Booth (1937) suggests the symbolic significance of joints which are the seat of pain and stiffness—the ankle to avoid taking a false step, the jaw to avoid giving away secrets by imposing silence; and he quotes a specific case in which there was stiffness and pain of the hips and sacro-iliacs as a protest against intercourse and pregnancy, the condition clearing up after sterilization. Nissen, too (1934), remarks that arthritic reactions must be regarded as fundamentally purposive, since they provide an easy way for the feeble psyche to avoid the stresses of life.

Where physical signs are not found to bear out the patient's description of his subjective symptoms it is a sound rule for the physician to consider whether or not the symptom may serve a useful purpose for the patient, but it should be remarked that this purpose may not be obvious to the physician, and the patient will only give him a clue to it by his unconscious reactions. The stiff knee of the boy who does not want to play football or walk to school is a common enough example of a very simple kind. This is not always obvious, however, for sometimes there is no apparent object. An example of a less obvious purpose is the case of a girl who is prevented from going to dances or to ride because of severe pain in her back, and is never done bewailing the fact that she is unable to enjoy these pleasures. Further investigation, however, shows that in fact she is intensely sensitive about her tallness and has really persuaded herself that if she did go to a ball no one would ask her to dance, and that she would look ungainly on a horse. So, after all, the symptom is serving a purpose because it is saving her from humiliation. Again, a similar condition was found to cover a feeling of deep-seated guilt in another girl who had been kissed at a dance; this incident had been followed by an intense shame really dependent on a distrust as to where her own sexuality might lead her, though consciously she denied that she had any sexual feeling or anything but a horror of the whole business.

Abnormal Postural Tone leading to Chronic Rheumatic Changes

Our next problem is how far a prolongation or perpetuation of abnormal postures and consequent disturbances of the postural tone of joints and ligaments may

lead to permanent structural lesions and "real" rheumatic changes. That such structural changes are not so easily induced as might be expected was shown by a remarkable collection of cases described by Hurst (1919) in which all sorts of contractures, often of long duration, were exhibited, but which by the therapeutic test were proved to be hysterical and the contractures cured within a very short space of time. I myself have seen a man of 43 who, among other psychoneurotic symptoms, exhibited marked rigidity of the right tarsal and metatarsal joints, which had apparently existed for the best part of forty years. He stated that to the best of his knowledge he had never been able to make these movements, and ever since he could remember he had been unable to stand on tiptoe on that foot and had never been able to walk long distances or to run like other boys owing to this disability. In after-life he found that if he walked more than two miles he got very tired. In the great war he was twice rejected for the Army, and finally passed into the R.A.V.C., where he would not have to do much walking. On examination the extensor muscles of the foot were not atrophied and the peronei and tibialis anticus worked normally. A short period of persuasion and suggestion sufficed to give complete mobility to the foot and toes, so in his case it was evident that no permanent alteration had taken place.

Even where marked trophic changes have occurred, with ischaemia, excessive sweating, etc., Hurst has shown that it is often possible to restore function completely by psychotherapy in a comparatively short period, but this possibility of quick cure would appear to be due to the non-intervention of other factors. These other factors are infection or perhaps toxæmia and degenerative changes. Hurst's cases referred to above were all those of relatively young men, probably with a reasonably good resistance to infection.

With, on the one hand, elderly people whose tissues are already the seat of degenerative changes and with, on the other hand, the "rheumatoid type," one of whose chief characteristics, to my mind, is a complete or almost complete lack of resistance as shown by the profound changes in the sedimentation rate and the Arneth count in the blood, a very different result may ensue, and what started as a hysterical unconscious simulation may end as a true rheumatic manifestation.

Psychogenic Rheumatism

It is obvious that in all so-called psychosomatic conditions the fundamental process is an emotional derangement which, acting through the thalamic and hypothalamic centres, affects the autonomic balance. But the location of the autonomic imbalance is by no means general, and it sometimes results in an asthma, sometimes in a peptic ulcer, sometimes in a dysmenorrhoea, and sometimes in joint or muscular changes. Hence, at least until our knowledge is more complete, it is necessary to postulate an organ inferiority which "localizes the disturbance and its effects."

Rheumatoid Arthritis

How far is there evidence that an emotional factor is of importance in the aetiology of this condition? In attempting to answer this question we are faced with the difficulty which is obvious in so many such inquiries. We may find that a given factor is present in a certain percentage of cases, but we have no real guarantee that among many aetiological factors this particular factor has

any significance. For example, in a series of fifty cases of typical "true rheumatoid" arthritis it was found (Burt, Gordon, and Brown, 1938) that 26 per cent. followed emotional crisis, some as definite as the following: "sudden onset of the disease two months after his 'boss' cut his throat, the patient having walked into the room just as he was doing it." "A month before the onset a friend had attempted to murder his wife and two children. The patient sat up with him all night and tried to quieten him." But we have no knowledge as to whether quite as large a proportion of people who have had such emotional shocks fail to develop rheumatoid arthritis, and there is no statistical evidence as to how many of those who develop other diseases—for example, pneumonia—have experienced emotional shocks and strains of a like nature.

In spite of this doubt, however, many authors have insisted on the important significance of emotional strain in the genesis of rheumatoid arthritis. Thus Booth (1937) writes:

"The histories of our patients before the beginning of the arthritic process can be summarized as follows. In childhood they were confronted by problems of adjustment which proved too difficult to be solved in a constructive manner. This resulted in a marked incapacity to find satisfaction in their relations with society, the family, and the opposite sex. Even material success did not relieve them of their nervous strain, because their drive to be active was in excess of their capacity to find useful channels for the release of their energy, due to their basic defensive attitude against the demands and risks of life. The tension which resulted from this situation was in fact released in a regressive physical way through general restlessness, travelling about, and neurotic neuro-muscular reactions."

Nissen (1934) states that 22 per cent. of 500 cases of arthritis could be classed definitely as having had sufficient emotional strain preceding the arthritic onset to warrant its being considered as an aetiological agent; while Jelliffe and White (1935) say: "The psychogenic discipline is also commencing to show that purely emotional reactions extend deep down in the individual's metabolic processes. . . . It is here considered absolutely imperative that such factors be evaluated in the study of some of the arthritides."

In Germany A. Jelinek (1937) and others have pointed out the interaction of psycho-physical reactions in arthritis, but the work of Swaim (1936) is most striking in this respect, for, starting from an orthopaedic approach, he says:

"We have been so concerned with the disease picture that we may have overlooked the real causes of functional disturbances which are present. With a closer study of the mental and spiritual defects of a large number of rheumatoid cases I have found deep-rooted fears, worries, resentments, and strain to be the basic causes of their ill-health. Because of this new spiritual approach to these underlying conflicts I have begun to see that I have been missing a great (possibly the greatest) therapeutic force which we may ever find. I feel that we doctors have a unique opportunity to reach, and meet, people's deepest spiritual needs, which so often result in the functional disturbances which, in turn, are forerunners of organic diseases."

"Much of the future progress in the art of healing the body will come along lines that recognize, and have an answer for, the healing of the soul."

" 'More people are sick because they are unhappy than unhappy because they are sick.' "

Again (Swaim and Harris, 1938):

"For many years we have believed that rheumatoid arthritis could be controlled only by complete treatment. Therefore, after working out an orthopaedic method of preventing

deformities we turned to the well-known psychogenic factors. These have been found present in 66 per cent. of the cases, according to Dr. Stanley Cobb of Boston. Since unhappy family relationships are responsible for half of these factors, we collected data about reactions to human relationships. We find that the emotional response of fear, resentment, worries, and inner conflicts are more important than the environmental factors themselves. These negative emotions were the result of personality forces and habits, such as selfishness and self-centredness and self-protectiveness. Spiritually the rheumatoid arthritics studied had no vital faith and were therefore fearfully facing life's responsibilities alone. The correlation of these negative reactions with the joint flare-up was astonishing in the 275 cases under observation. In looking for the answer to the self-centredness which resulted in fear and resentment we found the solution begins in the honest facing of themselves with the doctor, and with his aid ends in development of a vital faith. A deep religious faith is the most effective faith, provided the doctor himself has such a vital faith to give. Five years of observation has convinced us that just facing these negative attitudes is not enough to overcome them, but with the development of a faith fear goes, improved health follows, and, most important of all for the future welfare of the patient, personality changes take place. We find that unless a patient can return to his old environment improved in body, intelligently understanding his adjustment problems, and with a faith which gives confidence for the future, he has no real guarantee of permanent health. All of our combined medical and orthopaedic skill is vitally essential for recovery, but because of the psychogenic factors found in most rheumatoid arthritics we will fail to prevent recurring attacks unless we develop, in the patient himself, a power to control his negative emotional reactions. From these observations we are convinced that the control of the psychogenic factors in chronic rheumatoid arthritics lies in the development of a vital faith, which will meet these needs, with its positive philosophy for living."

If we allow that emotional shocks or strains are aetiological factors of importance in the genesis of rheumatoid arthritis, we must expect that they will exert their influence by inducing upsets of autonomic activity, and if rheumatoid arthritic patients show a high degree of autonomic instability it is reasonable to suppose that at least some of this owes its origin to emotional factors.

The typical onset of rheumatoid arthritis after emotional strain may be exemplified by the following case.

A young woman of 24, who for some years had been at home nursing her invalid mother, began to develop swellings in the fingers about six weeks after the latter died. These were symmetrical, and were characterized by tension in the joints and pain or stiffness in using her hands. These began to sweat, and both the muscles and subcutaneous tissue wasted and the skin became tense, shiny, and blue. The same changes, to a lesser extent, occurred in the feet. Some months later she began to have trouble in her elbows and knees, and eventually in her shoulders. The sedimentation rate was rapidly much increased. Her blood pressure was 138/86. Her blood picture showed: haemoglobin, 74 per cent.; red cells, 3,800,000 per c.mm.; white cells, 5,400 per c.mm., of which 2,800 were granulocytes and 2,600 lymphocytes. Her appetite was poor, and she was subject to attacks of diarrhoea.

In the series of fifty cases of undoubted "true rheumatoid" arthritis referred to above it was found (Burt, Gordon, and Brown, 1938) that there were ample signs of autonomic imbalance, especially of the sympathetico-tonic type, and of course fear produces a swing to the sympathetic and away from the vagal side. Thus vasoconstriction was present in 70 per cent. of cases, and definitely abnormal sweating, local or general, in 92 per cent. The gastro-intestinal segment, however, was not markedly affected; thus the barium enema picture was

normal in 64 per cent., while 36 per cent. showed some dilatation of the colon, though none were true cases of megalocolon. However, no cases of spastic colon (vagal effect) were met with. The blood pressure of fifty rheumatoid cases was slightly higher in both systolic and diastolic pressure than that of fifty normal controls, but the difference was only just significant.

Using the oculo-cardiac test in fifty cases of rheumatoid arthritis and fifty control cases, the following results were obtained:

	Total Number	Sympathetico-tonia	Normal	Vagotonic
Rheumatoid cases . .	50	33	17	0
Controls	50	20	22	8

Statistically this swing to the sympathetic side is significant. The atropine test was also applied, but did not appear to be reliable. This unreliability has been found by other observers.

The autonomic imbalance associated with rheumatoid arthritis has been noticed by many authors, notably by Pemberton and Scull (1938), who have shown abnormality in capillary circulation, and Wright and Pemberton (1930) in temperature adjustments; but can such vascular variations cause permanent or semi-permanent changes in articular or peri-articular structures? As has been mentioned above, Hurst was inclined to deny this, but there are examples of such changes which are apparently due entirely to peripheral nerve influences. The neuroarthropathies usually referred to as Charcot's joints, which are met with but are by no means universal in tabes and syringomyelia, are suspect, because in the view of many authorities they are ordinary cases of osteo-arthritis in which the absence of the defensive mechanism of pain has allowed a much greater strain to be put on the joint, with a consequent much greater destruction. More important evidence may be obtained, however, by the observation of cases of poliomyelitis. During the period in which limbs are commonly immobilized in the early stages for the purpose of resting the inflamed neuro-muscular apparatus it is common to find that one or more joints have become stiff and painful when first the patient is taken off the splint, but in the majority of cases this passes off in a very short time. In others, however—and this was especially marked in a series of cases observed by me in late 1937 and early 1938—the joints were tender, slightly swollen, stiff, and painful for weeks, and were restored to normal only after prolonged and careful treatment. Presumably no one would suggest that there is any primary involvement of joints in poliomyelitis, so that this condition must assuredly have been due to autonomic influences, though of course in this instance probably not of emotional origin.

The full and convincing proof of the psychogenic origin of joint changes of the rheumatoid type would be afforded if it were possible to cure the condition by psychotherapy alone; but, so far, I know of no authentic cases in which this can be claimed without dispute. Still, in many instances rheumatoid arthritis is a self-limiting disease, and if care has been taken in the early stages to avoid crippling deformities it is wonderful how large a measure of recovery may take place even in severe cases. Personally I would unhesitatingly support Swaim and Harris's contention, already quoted, that this recovery and freedom from relapse depends in large measure on the patient's degree of emotional stability and on the satisfactoriness of his philosophy of life.

Other Forms of Chronic Rheumatic Disease

Those who have considered the psychogenic factor in arthritis have as a rule confined their attention to rheumatoid arthritis, but the other forms of rheumatism are worth consideration.

If osteo-arthritis is due to degenerative changes, to what extent are these degenerative changes due to a negative emotional attitude towards life? There is a lot of truth in the adage "A man is as old as he feels," and the person who keeps a youthful spirit is likely to keep supple joints. However that may be, there can be no doubt whatever that the amount of pain and stiffness exhibited by a case of osteo-arthritis depends just as much on the attitude towards life as on the degree of bony or ligamentous change disclosed by the radiograph, perhaps even more. I can recall a lady with a definite but mild degree of osteo-arthritis who is in a fair way to become a bed-ridden invalid; but the real cause of this is a slightly senile husband, who in addition to being a querulous bore has a perseverant idea that his wife ought never to walk less than a mile and a half a day, wet or fine, winter or summer. I can recall another old lady of 78 summers (not winters) who has an advanced osteo-arthritis of her hip, but who with the help of a stick almost hurls herself about her garden with an ungainly but effective gait, greeting the unfolding of the seasons with an intense delight.

Fibrositis is unquestionably influenced by emotion. Two of the worst cases of fibrositis I have met with in young people were in the wife of an airman who had had two bad crashes and was still flying, and in an over-conscientious schoolmistress who was involved in a pseudo-homosexual entanglement.

A striking instance of the effect of emotional strain on the disability produced by fibrositis is the following case.

A young married woman of 26 complained of such a degree of pain in her hip and shoulders that she was in continual distress and unable to do her housework except with the greatest difficulty. She was found to be suffering from slight but definite fibrositis in these regions, and conventional treatment by heat and massage was undertaken. This, however, only made her worse. Examination showed that she was quite abnormally sensitive to pain of all sorts, and psychological examination disclosed a confused medley of resentments against thwarting of her natural impulses during childhood and adolescence. She was the youngest of the family, and definitely of the sensation type, ready to enjoy all sorts of harmless sensuous experiences from which she was rigidly "protected" by her overanxious mother, while she was snubbed by a serious-minded sister who had no use for "men, dances, or parties of any sort." She had developed a sense of guilt with regard to her wish to indulge her "sensuous" pleasures, and her pains were serving as a protection against her doing so. However, when the situation became clear to her and she realized that as a married woman she was free from the restraints of home she began to open up, and of her own volition started learning tap-dancing and began to realize that she could do things, thus freeing herself from her inner moral inhibitions and from the inhibitions imposed by her pains.

Later on fibrositis depends in large measure on what Weil (1936) has called micro-traumatism, the effects of flat-foot, knock-knee, mild kyphosis, etc.; and how often are such conditions acquired in adult life due to asthenic emotions and a hopeless attitude towards life!

Is the gouty colonel irritable because he has gout or gouty because he is irritable? That he is both no one will deny. A recent case has struck me forcibly. The patient was sent to me as a severe alcoholic. I have no doubt that the basis of the story is a cyclothymia, a mild degree of manic-depressive psychosis. The sequence is:

depression—loss of interest in work—irritability—alcohol—much alcohol—gout—less alcohol, diminution and disappearance of gout—cheerfulness—quite hard work—depression; and so round again. If it were possible to break the sequence—a big "if" now I am afraid, as it has been going on a long time—I am reasonably confident there would be no more gout. Emotion certainly alters metabolism—of that we can be sure—and it may well be that in some cases this change is set in motion by the mood of the patient.

Conclusion

From all this it is fairly evident that we have not advanced very far in any exact knowledge of the psychogenic factors in chronic rheumatism, yet we have probably got far enough to make it clear that here is a field which badly needs further exploration, and to make us realize that if we want a healthy nation the happiness of the greatest number must be the goal of social service. Chase out the "jitterbug," and other bugs won't find it nearly so easy to thrive.

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The Institute of Hospital Almoners was founded thirty-one years ago, and its work has grown steadily ever since. In the report for 1938 it is stated that there are now 370 almoners at work in this country and about 270 students in training. In that year twenty-eight new posts of this kind were instituted, some in centres which had been without the benefit of certificated almoners working to aid the financing of voluntary hospitals as well as to secure the maximum benefits for the poor and needy as regards hospital treatment of all kinds. An almoner was appointed last year to the post of Government welfare officer in Jamaica, and at the end of that year there were vacancies to be filled in Hong-Kong, Malta, and Australia. The Institute has an executive council in London and local selection and advisory committees in eight other university centres. The preliminary part of the training for the certificate is undertaken at a university, either in a degree course which includes the social science subjects, or more usually in the two years' work required for a certificate or diploma in social science with the practical work which that includes. It is not until the student has secured the theoretical qualification that she passes to the third and final year of specialized training in those hospitals in which certificated almoners undertake the training of students. Before she is ready for this training the student must have had experience in general family case work. Particulars may be obtained from the Institute, the offices of which are situated in Tavistock House North, Tavistock Square, London, W.C.1.