II

BY

E. H. CAPEL

The duties of an industrial medical officer are mainly preventive and there is little scope for treatment of the individual psychiatric case at the factory. There is, however, much scope for the application of preventive psychiatric methods both to the individual and to those who work with him, or over him, or in other ways influence his working environment. The industrial doctor has a wide field to cover. Whilst he may forget a good deal of therapeutics, midwifery, or diseases of children, he must make up for it by a knowledge of chemistry, physics, engineering, factory management, safety methods, welfare and other matters peculiar to industry. But psychological and psychiatric problems form a considerable part of his work and he should have sound knowledge of the diagnosis and correct classification of mental disorders. He should be able to form a good idea of the prognosis and should know on broad lines the principles of treatment and what results are to be expected. Even so there are circumstances in which the expert help of a psychiatrist can be of much use to him. The medical officer in industry should also have a detailed knowledge of working conditions, including knowledge of systems of payment, bonus and incentive systems, time-study methods, and the characters and personalities of persons in responsible positions. He will, with experience, come to know where in the factory and in what circumstances nervous disorders may arise. His main interest in the field of psychological medicine will be in the minor disorders—states of fatigue, depression, anxiety, neurasthenia and hysteria. The full-blown psychoses are uncommon and do not usually, in my experience, have much relation to working conditions. However, there are psychiatric aspects of certain special duties of the medical officer which must be considered.

Examination of New Employees

The object of a pre-employment examination is to ascertain if a person is fit for a particular type of work, or to determine the type of work for which he is best fitted. It consists of a physical examination and sometimes also an assessment of personality, aptitude tests, intelligence tests, and possibly other special investigations. It is usual for personality, aptitude and intelligence tests to be conducted by personnel workers or others not working directly under the medical officer. The tests employed are usually evolved by some non-medical body such as the Institute of Industrial Psychology, and hence may not be related to the investigation or detection of neurosis or other abnormal mental states. When Millais Culpin and May Smith investigated over 1000 workers in Government departments they found that 30 per cent. of them had serious psycho-neurotic symptoms. The importance of this cannot be ignored and I suggest that any tests used which have a psychological basis should be carefully correlated with the medical examination.

The taking of a history from the point of view of assessing personality and likelihood of nervous breakdown may not be easy as it involves discussing private and personal matters before the person is engaged, and it is suggested that this part of the examination might be deferred until some time after engagement. The sort of illnesses from which a person has suffered, the type of work he has done and his reaction to it may, however, provide useful clues. In the investigations by Culpin and Smith they arranged an interview of about 20 minutes; they avoided a rigid questionnaire and led the subject through a series of hypothetical situations which might simulate symptoms commonly encountered. Obviously experienced investigators like these worked at a great advantage over ordinary practitioners, and so it might be possible for experts to devise a suitable, concise case history scheme for guidance. It might also be possible to develop more objective tests for the purpose. Culpin and Smith apparently found the dotting machine of much use in picking out obsessinals.

Other Medical Examinations

Apart from the original pre-employment examination, routine follow-up examinations are occasionally carried out in industry, but as a rule these only relate to young persons. They may provide useful information on how the person has settled down to the job.

Examination of employees returning to work after illness is more commonly carried out and provides a useful way of getting to know employees, especially those who may be less fit. The interview will not only indicate the degree of recovery attained but may reveal factors in the work which helped to precipitate the illness and so enable appropriate preventive measures to be taken.

Apart from these cases the industrial medical officer may see persons suffering from neuroses, or other abnormal mental states, under various other circumstances which include the following: (1) persons referred for examination because of unsatisfactory work or conduct or behaviour; (2) acute cases attending for treatment—hysterical fainting and so on; (3) certain occupational neuroses, accident neuroses and cases discovered by chance—perhaps during treatment for another condition such as sore throat or cut finger. Investigation of these cases will follow along standard lines to detect and correct any offending environment, or to transfer the patient to more suitable conditions. Psychotherapy in the ordinary sense is not usually necessary: this is surely the job of the panel doctor or outside specialist.

Conditions at Work

A number of the industrial conditions known to lead to special emotional strain have been investigated, but it must be realized that straightforward fatigue can be a potent factor in causing breakdown under otherwise normal stresses. Likewise, simple likes and dislikes can at times cause emotional stress leading to real illness. We have all seen persons get quite ill over such a simple thing as being moved to another shop away from a friend and even in war-time every effort should be made to employ persons on work and under conditions that they like. Special factors which more commonly give rise to excessive emotional stresses are the problems of supervision, methods and rates of pay, and absence of facilities for the rectification of defects and grievances.

Supervision. A person appointed to a supervisory position in a firm is judged on two standards—his technical knowledge and ability, and his capacity for handling those working under him, the net result being indicated by the efficiency and output of his section or department. Both qualities are important, but they by no means always go together. Frequently technical ability is given prior place with little or no consideration of the man’s personal qualities, or if personal qualities are considered, a man is selected for his ‘drive.’ We must therefore consider what qualities a man should or could not have in order to control and supervise others. It is perhaps easiest to begin with some of the qualities

he should not have, and the sort of effects that may arise from them. At the start one can generalize by saying that it is desirable that no neurotic or person of appreciably abnormal temperament should be in charge of others. But many neurotics are in some respects most efficient workers and therefore liable to be selected for these senior posts. Of the neurotics that are particularly unsuitable the obsessians are outstanding. They are frequently above the average in intelligence, and often conscientious and tend to overwork. Their unreasonable drive makes them exacting and harsh and they expect others to overwork as they do themselves. Their over-conscientiousness and difficulties in making decisions give rise to much emotional stress with consequent breakdown. Unfortunately the combination of more than average intelligence with excessive drive often leads to their selection for these jobs from the false idea that they will get the most out of the workers.

Of the other neuroses in relation to supervision it is not necessary to say much. It is obvious that a person showing excessive anxiety when facing responsibility cannot inspire confidence and be a good leader. Likewise the hysteric may get over his difficulties by converting them into physical illness, but the problems arising in his department need settling in the interests of others besides himself. It must not be construed, however, that anyone individual free from neurosis is automatically a good leader or supervisor. It is not our job as doctors to pick out the good ones but to pick out the bad ones—those who may themselves break down under responsibility. Or who, through their mental state, may have a bad effect on those under them.

Systems of Payment. There has been a steady increase in recent years of the system of payment by results—payment by a bonus or incentive system as distinct from payment on a flat hourly rate or day rate. There is a streak of laziness in many of us and such a system seems to be the only one which will make the lazy worker work. In the opinion of industrialists such system of payment by results has definitely come to stay. There are, however, certain pitfalls in the use of incentive systems which are not always appreciated. To quote Mace: 2

'There is, it is clear, an optimal maximum expenditure of effort which can be reasonably expected of a worker during his working day. This optimum effort is determined by the needs for recuperation from fatigue, for comfort in work and a variety of other psychological considerations.'

Incentive systems must be justly taken to this limit but beyond this they lead to inefficiency through increasing fatigue and emotional difficulties.

Experiments have shown that the placid, steady, unperturbable types are the ideal workers and that the anxious, and easily disturbed individual is not suited. But it is possible for an incentive system to favour the attainment of a steady, placid state of mind, rather than to induce an anxious struggle to attain an impossible standard. Mace suggests that the ideal incentive system would embrace the following characteristics:

1. It would provide an initial standard for the beginner well within his capacity. This would induce a sense of achievement from the outset.
2. It would provide a graded series of subsequent standards (based on the normal practice curve), the progressive attainment of which at appropriately spaced intervals would be within the capacity of an average worker maintaining a reasonable level of effort. In this way the rate of continual progress would be added to the consciousness of initial achievement.

3. The standardizing standards would be provided for different periods of the working day. As the former were based upon the normal practice curve, so the latter would be based upon a view to known effects of fatigue in the given operation. Such a series of standards would provide for the maintenance of an equitable performance throughout the working period.

4. My own experience and that of many others has shown that incentive systems carelessly applied will rapidly cause discontent and precipitate neurotic illness in those predisposed. It must not be assumed, however, that because bonus systems may give rise to trouble that flat rates of pay are necessarily desirable or better. Much anxiety and discontent may be caused by unfair flat rates, by lack of progress and promotion, and by lack of opportunities for the ambitious individual. In factories where monotonic incentive systems have been introduced it is common for those still working on a day rate to ask to be paid by results and so get a chance to earn more.

OCCUPATIONAL NEUROSIS

The group of diseases known as occupational cramps—writer's cramp, telegraphist's cramp, typist's cramp and so on—have remained rather on the lookout. However, the present tendency is to regard them as neuroses. Treatment is difficult and the prognosis bad. Careful selection could almost certainly minimize the number of cases. Miners' myasthenia has likewise been considered to be a neurotic manifestation, in the grounds that it is frequently associated with other neurotic symptoms. To me personally, the other commonly given explanation seems much more plausible—namely, that through defective lighting of the coal face the miner develops the habit of using peripheral vision instead of central, fixed vision, with the result that in time a habit becomes established leaving him unable to fix an object actually on the macula.

ACCIDENT NEUROSIS

Some accidents, often trivial ones, are followed by symptoms which cannot be organically related to the injury, and a study of these symptoms shows that the majority are examples either of conversion hysteria or anxiety neurosis. Very occasionally an accident will precipitate some different type of neurosis or a psychosis. The aetiology is briefly as follows. Following an accident it is natural for a workman to inquire upon his recovery and form some idea of what recovery he may get and when. Sometimes he is wrong. He gets worried and preoccupied with his slow progress. Perhaps pain or some other symptom persists, and so he begins to doubt if he will ever recover. He feels insecure about the future and questions his ability to do his old job again. He is faced with the alternatives of receiving compensation whilst ill or of doubtful recovery with diminished earning capacity. It is not uncommon, therefore, for neurotic individuals subconsciously to choose the steady security of compensation rather than face an unknown future and to produce hysterical symptoms to attain this. On the other hand, the worker may brood and worry and develop increasing symptoms of anxiety. Not understanding the nature of his symptoms he will naturally link them up in his mind with his accident, thereby establishing a vicious circle. The case with a serious injury seldom shows neurotic symptoms—the physical state is sufficient to establish disability, and only when recovery is taking place do neurotic symptoms tend to appear.

Treatment of this condition, except by a lump sum settlement of the compensation claim, is, in my experience most unsatisfactory. Prevention is therefore important in every case. An accident is a psychological as well as

a physical shock and demands tactful handling from the start. It is most important that the patient should have confidence in his employer and feel sure of a fair deal. The physical diagnosis should be made early and the patient given as accurate a prognosis as possible with a strong suggestion of recovery as far as is likely with no unnecessary mention of after-effects. It is the tactless handling of patients by solicitors, insurance agents, relatives who exaggerate the consequences and suggest ulterior motives on the part of the employer, and even by doctors themselves, which sows the first seeds of neurosis. In the case of minor injuries, return to work as soon as possible should be encouraged. In other cases suitable rehabilitation and training should be started as soon as is reasonably practicable. The habit of putting a worker on a specially created job which he can see will be no more than a stop-gap and which does not lead to his own or other useful work again, is wrong. It merely serves to fix in his mind what he already fears—that he will never be able to do his old work or earn full wages again.

Proper rehabilitation leads a man step by step back to his original job, or, if necessary, to other suitable work, and it is essential that these steps be explained to him as he goes on. My own experience has shown that cases attending a hospital where physical treatment is good, where adequate rehabilitation is carried out, and where there is an active interest taken in the patient all the way through, seldom develop neuroses. In less efficient hospitals, where rehabilitation gets no further than unending radiant heat and massage and where the surgeon seldom sees the patient, the reverse is the case.

I have discussed the problem as it appears to the industrial medical officer and shown the circumstances under which he can apply measures to prevent psychiatric trouble arising. Treatment of the individual is outside his immediate scope; this is a matter for the private doctor. But there is an urgent need, particularly in the provinces, for more psychiatric clinics. In such clinics co-operation between the psychiatrist and the industrial doctor is vital for success.

III

BY

D. ELIZABETH BUNBURY

Industrial medicine is an important part of social medicine: it is concerned with the health of a large number of individuals and with providing conditions in which they can maintain health. Brigadier Crew says:

'Preventive medicine is medical science applied to the elimination of sickness by appropriate social and collective measures based upon the findings of clinical medicine and the ancillary science of the individual. Social medicine, rooted both in medicine and in sociology, is not merely or mainly concerned with the prevention and elimination of sickness but is concerned also and especially with the study of all social agencies which promote or impair the fullest realization of biologically and socially valuable human capacities.'

The objective of the industrial medical officer as regards psychological health should include aspects of both preventive and social medicine—preventive in so far as he tries to remove stresses likely to cause psychological ill-health, and positive in so far as he is concerned with providing an environment in which the worker can contribute of his best. Crew, in the same article, goes on to say:

'In the Army as in civil life, much sickness is nothing more or less than disinclination born of dissatisfaction and transformed into disability. We of the Army know that sickness is rarely such an illness as to be considered in a goodly enterprise, the purpose of which is understood by the troops and applauded by the community of which they are a part. We know that the feeling of being forgotten and of being frustrated are the prodromata of much serious sickness.'

But these are generalities and when we come down to the practical questions of what the industrial medical officer can do things become more difficult. A few practical examples will make it clear that much useful work can be done which will lessen the amount of neuritic illness in the factory and make for less friction and a generally happier atmosphere.

Problems of the Factory as a whole

The question of frequency of shift changes is important. Workers may complain of anorexia, dyspepsia, and insomnia at the time of change of shift, and most of them attribute this to night work; but relatively few workers on permanent night work show this syndrome, which seems to be due to the change of shift rather than to night work itself. The problem of long hours is complex; it is also concerned with overtime pay. In one factory a foreman, on his own initiative, reduced

1. Lancet, 1944, 2, 617.