MEDICAL PROBLEMS IN WAR

This is the second of three articles surveying the literature of neuroses in war

NEUROSES IN WAR

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Psychopathology

Three schools of thought can be discerned among the numerous aetiological views advanced in the literature of the last war. They attributed war neuroses to (1) anatomical lesions of the nervous system; (2) inborn biological and psychological inferiority—the psychopathic constitution; and (3) psychological reactions to war experiences in individuals previously sensitized to emotional disturbances subjectively similar although objectively different in their nature.

Early writers on the subject noted the purposive nature of many of the neurotic symptoms of soldiers but failed to differentiate between conscious, preconscious, and unconscious aims. No distinction was made between malingering and hysteria, and the patients were treated accordingly. Authors of that period stressed the desire for removal from the front line and the wish for material compensation as ulterior motives of neurotic manifestations. The absence of neurosis in severely wounded and war prisoners was noted, and was interpreted in the sense that in both cases a "flight into illness" was no longer needed, as the aim of removal from acute danger was already attained. Terms like "neuroses of covetousness" and "defence and protection neuroses" were coined. To other observers the desire for gain was of minor aetiological importance, but came into action once the neurosis was established. In their view the neurosis itself originated in an incompletely recognized conflict between sense of duty, patriotism, and military discipline on the one hand, and the wish to escape from painful experiences on the other. With regard to the initiating terrifying experience, it was suggested that during the transitory disturbance of consciousness often preceding the onset of the neurotic dissociation phenomena a splitting off of the affect from ideational content took place, resulting in fixation of psychoneurotic symptoms (Bonhöffer). In military neuroses the display of helplessness, the need for care, and in some gross cases childish behaviour and speech were taken as signs of a reactivation of defence mechanisms of infantile pattern (Gaupp and Schmidt). These findings recorded by psychiatrists tally with those of psychoanalysts (Jones, Abraham, Eder, Ferenczi, Simmel) and authors with allied views (Crichton-Miller, Hadfield, Nicolle). They acknowledge the volitional nature of symptoms in both civilian and military neurosis, but separate such almost conscious motives as removal from danger and craving for sympathy from those which are completely unrecognized. The precipitating event, whatever its nature, and the current conflict over showing fear revive deeply buried archaic conflicts and lead to a regression to infantile patterns of behaviour. Deep conflicts over unrecognized sadistic impulses are often given as

examples. A bayonet attack or the sight of a mangled body of a comrade will arouse horror in anyone, but will provoke a disproportionate reaction in individuals in whom there are pre-existent unrecognized conflicts over violence and aggressiveness. During peace time many such individuals were able by sublimation, reaction formation, or environmental manipulation to avoid situations likely to provoke their own aggressive impulses. During war, on the other hand, not only was the general taboo on violence diminished but they were forced by military service into situations which would inevitably have stimulated their aggressiveness and have provoked anxiety. This anxiety is a signal of a threatened breakdown of defences against aggressive impulses. If further stimulation of aggressive impulses took place a complete breakdown ensued.

Psycho-analytic writers describe in neuroses of war a basic personality structure characterized by self-centredness, over-conscientiousness, lack of sociability, and lack of affection for relatives and friends. Such individuals suffer from a feeling that their personality has been neglected and that their importance is not sufficiently recognized. Many of these men were unable to carry out their tasks in practical life; others, capable of doing this, showed little initiative or energy (Abraham). This group often revealed an effeminate disposition, were dependent on their wives, and frequently were weakly potent. Life in the trenches exposed them to a danger of death, which constituted a threat to their excessive self-love. Community life ran counter to their asocial tendencies, and the unconditional demand for self-sacrifice in war called for a renunciation of narcissistic privileges. More so than others, individuals of this type were prone to conflicts about aggressiveness, and through their latent homosexual tendencies the exclusive association with men constituted a special stress. Under such stresses these individuals increasingly regressed to a narcissistic level of development, leading to a state of infantile helplessness, with a complete surrender to their suffering and a need to be pampered, cared for, and petted like children. The withdrawal of object libido (diminished capacity for external interests and emotional ties) results in an inflation of ego libido (self-centredness), which is expressed in abnormal hypochondriacal sensations and a further diminution of genital potency.

Symptomatology

To say that the psychological structure of the war neuroses does not differ from that of traumatic neuroses in peace time implies that, despite the specific colouring given by the special circumstances of onset, there is no fundamental difference in the symptomatology of these neuroses. A description of such syndromes as simple terror, anxiety states, conversion hysteria, including stupor states and obsessional states, is given elsewhere. A few points of special interest emerge from a study of the literature.

Variability of Symptoms

A review of the literature shows a remarkable variation in the nature and incidence of the neuroses. This may be due to the personalities of the observers, the places of observation, and the variability of the material. Guided by their peace-time training and their field of interest

many observers reported syndromes which, as in the case of Babinski's "reflex disorders," were rarely seen by others.

Psychiatric casualties seen at a casualty clearing station differed from those at base hospitals. Minor casualties such as terror states never reached the base hospital. Gross hysterical disorders often developed after transfer behind the firing line (Roussy and L'Hermitte, Mott, Schneider). Psychosomatic disorders such as effort syndrome, dyspepsia, and "rheumatism" were often misdiagnosed. They were frequently admitted to medical or other wards, and came late, if ever, under the observation of psychiatrists. "More neuroses lay in the medical wards than in the psychiatric hospitals" (Culpin).

Fallacies arose from a study of selected groups. Officers are said to be more often affected than men and in a different way (H. Head). Of the admissions to a British casualty clearing station over a period of thirteen months there was one officer patient to every fourteen patients of other ranks, whereas the actual proportion of officers to other ranks in combatant formations was about 1 in 30. According to the official American history "neurasthenia" was five times as common in officers as in men, and had also a less favourable prognosis as regards return to the front, since only 25 per cent. of the officers returned to duty, compared with 61 per cent. of the men. Less than a quarter of British officer patients gave a history of being buried or blown over by shells, in contrast to one-half of the other ranks. Conversion hysteria was almost entirely confined to privates and N.C.O.s, and occurred, for example, only five times in 353 officers with psychological disorders. On the other hand, the vast majority of patients with anxiety states were officers.

The severely wounded hardly ever displayed neurotic manifestations, which often develop after physical health has been restored. According to some authors psychoneuroses are extremely rare among war prisoners (Claude, Mörchen, Wilmanns, His), whereas others, admitting the difference from symptoms seen in combatant soldiers, describe a specific syndrome occurring in those conditions. Bonhöffer, Vischer, and others described how the confinement and monotony of life in prison camps, accentuated by sexual deprivation and lack of privacy, led to "barbed-wire disease." The main symptoms were increased irritability, intense difficulty in concentration, and restlessness. Failure of memory was frequent, and many showed the depression to which the French authors gave the name "cafard."

Prodromal Signs

Neurotic symptoms in war time sometimes appear quite suddenly, but there are usually prodromal signs. The most common of these are (1) fatigue, (2) increased indulgence in alcohol or tobacco, (3) a tendency to become unsociable or irritable, (4) a loss of interest and disinclination for effort, and (5) emotional crises—for example, crying fits or states of anxiety and terror. Character changes were found. "The bellicose individual becomes moody, the solemn sullen talkative, the care-free reckless, and the well-behaved takes to petty crime" (Tyrrell). Soldiers in the prodromal state often display a hypersensitivity to acoustic stimuli, and tachycardia, increased sweating, and slight cyanosis of the extremities were found. If soldiers with such symptoms remained in the firing line a fully fledged psychoneurosis ensued.

As described below, differences in the nature of the prodromal symptoms were held to exist, corresponding to the later psychological disorders (MacCurdy).

Anxiety States.—The first sign was a feeling of fatigue, abnormal in its capricious nature and therefore interpreted as a form of anxiety. There was also a feeling of weariness and tenseness, with a restless desire for action or distraction, often accompanied by irritability and difficulty in concentration and a tendency to start at any sudden sound. Although, in contrast to ordinary fatigue, the feeling of weariness usually improved towards night, there was great difficulty in getting to sleep and a long period of hypnagogic hallucinations in which the main events of the day appeared in troublesome visions. When it did come sleep was frequently interrupted by battle dreams. When this situation had progressed for some time the soldier developed fear and horror of the sights around him and was unable to keep his mind away from the possibility of injury. Previously acquired judgment concerning the direction of shells was lost and consequently every shell seemed aimed at him personally. By this time there began the second prodromal phase, characterized by the fear of failure to conceal anxiety which is known to be there. Three practical avenues of escape are then considered: the soldier may receive an incapacitating wound, he may be taken prisoner, or he may be killed. Torn between fear and the fear of showing fear, neurotic officers in particular often display great courage and on the whole received more decorations than non-neurotic ones (Schneider). A stuporous state may occasionally usher in a neurosis. Traumatic loss of consciousness is followed by a period of confusion and delirium during which consciousness is regained for short intervals. On the other hand, the prodromal "functional stuporous state" is one of acute terror, with dilated pupils, a cold sweat, violent trembling, shallow breathing, and inability to perform any voluntary movement. It is succeeded by a period of confusion and amnesia, during which voluntary movement is possible. Myers suggests that the "unconsciousness" which figured so frequently in the histories of many patients may be identical with this stuporous state.

Conversion Hysteria.—Although in conversion hysteria, as in anxiety states, fatigue was the initial symptom, it was nearly always less severe. Sleeplessness was infrequent and nightmares were rare; more common was a history of open grouching and resentment of the need to fight. "Jumpiness" was less pronounced and there was a relative absence of the conscious mental conflicts between duty and ideals which took such a prominent part in the prodromal anxiety state in officers. In the history of practically every hysterical case examined by MacCurdy there was elicited the hope that they would be incapacitated from active service by being wounded. In consequence such an event as concussion provided the occasion for the development of definite symptoms. Alternatively, as with anxiety cases, the infliction of an actual wound did not precipitate hysterical symptoms, and these developed later during convalescence after a "période de méditation" (Charcot, Roussy, L'Hermitte, Wm. Brown).

Psychosomatic Disorders

The mechanistic bias of the time accounted for the incomplete understanding and recognition of psychosomatic disorders during the last war. The most comprehensive study of this field was made by Culpin, who contrasts what he calls somatic hysteria, combined or alternating with anxiety states, and somatic manifestations in psychasthenia. In conversion hysteria the patient dissociates himself completely from his symptoms, whereas

in obsessional states he realizes the morbid nature of such symptoms as tremors, stammers, and tics, but is unable to control them. A few psychosomatic disorders are chosen for discussion.

Effort Syndrome

First mentioned by Harthorne and Da Costa in the American Civil War, a condition was often seen during the last war characterized by a type of cardiac symptom without any structural lesion. Terms mentioning the heart (soldier's heart, irritable heart, D.A.H.) proved obviously dangerous, and it is now agreed that they should be replaced, as Sir Thomas Lewis suggested, by the safer and more accurate label of "effort syndrome." The significance of the disorder will be realized if its frequency and incapacitating effects are considered. No absolute figures of the incidence of psychoneuroses in general and of effort syndrome in particular are available, but in 1,043,653 British casualties admitted to medical units from 1916 to 1921 there were 13,408 cases of functional disease of the heart, compared with 21,549 cases of functional disease of the nervous system—that is, two of functional heart disease to every three of functional nervous disorder. Among 32,983 patients with functional nervous disease admitted to American hospitals from April, 1917, to May, 1919, only 4,376 cases of "neurocirculatory asthenia" were found, the difference being possibly due to the selection of recruits and the shorter period of active service. According to British and German observations (Lewis, Hofmann, Jacob) only one patient in every ten admitted to cardiac hospitals suffered from organic heart disease.

The main feature of effort syndrome is an abnormal physiological reaction to effort—breathlessness, especially on exertion, fatigue or exhaustion on exercise, precordial or other pain, giddiness, blurred vision, vasomotor abnormalities, and fainting. The exercise tolerance test shows an undue increase in pulse rate and a delayed return to normal. The blood pressure is said to show no significant variation. About one-half of the cases began in civil life, under conditions where physical strain was unimportant (Lewis, Parkinson), and a further 12 per cent. during the period of training (Lewis).

The aetiology of the condition has been widely debated. It has been attributed to heart "strain," infection, tobacco, alcohol, hyperthyroidism, gas poisoning, and shell shock. According to Hurst "soldier's heart" is only one manifestation of the nervous exhaustion or neurasthenia which results from the combined effects of physical fatigue, mental exhaustion, and toxæmia; the toxæmia most frequently being of exogenous origin (bacteria or tobacco) and rarely of endogenous origin (endocrine secretions). Lewis dismisses heart strain, excessive indulgence in alcohol or tobacco, gas poisoning, and hyperthyroidism as important aetiological factors, pointing out, for example, that heavy smokers showed a better prognosis. In 80 per cent. of his cases infectious diseases had preceded the onset of the disorder, although it was only in 30 per cent. that they immediately preceded the onset of symptoms. He stresses the frequency of the disorder in soldiers who previously followed sedentary occupations and in sensitive, querulous, highly strung, or depressed individuals. His group of cases included an abnormally high number of teetotallers, and 15 per cent. had morning spermatorrhoea. In his view there was no uniformity of aetiology, and constitutional weakness or retarded development, exposure, and infection played varying parts. Similar views were expressed by A. Abrahams. The psychiatric effect of effort syndrome was investigated in more detail by Oppenheimer and Rothschild, Cohn, MacCurdy, Culpin. The frequency of a positive family history or of factors predisposing to psychoneurosis was stressed (Oppenheimer and Rothschild). Cohn and Culpin independently emphasized the psychological implications of certain features often found in effort syndrome patients, such as tremor of hands, ready sweating, disturbed sleep, shakiness on slight excitement, ready "starting," and a feeling of depression. "There is no break in the series joining these and others in which a typical anxiety coexists with a rapid pulse, shortness of breath, precordial pain, and occasional faintness and giddiness. In short, with regard to many patients it is clinically a matter of indifference whether

they should be placed under one heading or another." "Disordered action of the heart is most often a neurosis" (Culpin).

Inconsistent views were held with regard to amenability to treatment; according to most authors cases of effort syndrome are highly resistant to any form of treatment (Abrahams and Parkinson). Men of feeble physique with symptoms in civil life are unlikely to improve sufficiently to make good soldiers; with this exception the prognosis is good (Hurst). Out of 558 cases seen by Sir Thomas Lewis approximately 50 per cent. were judged to be unfit for any category of duty; of the 239 who were followed up only thirty-nine returned to the firing line in eleven months. These figures do not correspond with those of the official history of the war, in which it is stated that of 13,408 cases of functional disease of the heart 11,403 were finally disposed of by return to duty. Experience of the results of systematic psychological treatment are not available.

Gas Neuroses

Fundamentally similar in structure but with a predominance of respiratory symptoms were gas neuroses (Elliott, Rogers, Hulbert). "Gas neurosis was to the lungs what effort syndrome was to the heart." An epidemic of "gas hysteria" was described by the official history of the American Expeditionary Force. Following desultory gas shelling spread over eight days, 500 men returned to one field hospital as gas casualties. The symptoms described were a feeling of fatigue, pain in the chest, slight dyspnoea, coughing, husky voice, an assortment of tingling and burning sensations referred to the throat, and some indefinite eye symptoms. Physical and neurological examination was practically negative. As these men came from battle-tested troops it was regarded as inconceivable that they were malingering; more probably a number of factors acted together at that time to lower morale and reduce inhibition to a state where many utilized any suitable extraneous opportunity as a route to escape from an undesirable situation. Simple reassurance was given and the patients were convincingly told that they would be able to return to duty on a certain day at some specified hour. Subsequently the symptoms were practically ignored and strict military discipline was enforced. Rapid recovery followed and the wave of cases ceased spontaneously at the end of eight days.

Organic Disorders with a Large Emotional Component

Warfare gave a unique opportunity for studying certain organic diseases in which emotional factors are alleged to play a prominent part, of primarily aetiological and aggravating importance. A review of the literature is disappointing. Most authors unfortunately confine themselves to a statistical evaluation of certain organic diseases in relation to emotional disturbances and nervous disorders.

Alimentary Disorders.—An increase in dyspepsia under the stress of warfare was frequently noted (Albu, Schmidt, Strauss, Romberg). Individuals who suffered from similar disorders in peace time were particularly affected. One-half of the patients fell ill before they had seen any front-line service, and a further one-third developed symptoms during the first week in the firing line. Constipation, gastric hypersecretion, vomiting and diarrhoea, and pyloric spasm were commonly seen. The personality type of the patients affected was definitely different from that in cardiac neuroses (Kutzinsky). There was no conclusive evidence to suggest that peptic ulcer emerged from the syndrome. Most authors agreed that the incidence of peptic ulcer during war was not higher than during peace time, but relapses of peptic ulcer were repeatedly seen in those who had suffered from it in peace time (His). Frequent onset of stress-dyspepsia or peptic ulcer on demobilization has been noted (Davies and Wilson).

Diabetes.—Diabetes was a rare condition among soldiers. There were only two diabetics in 40,000 returned American soldiers (Joslin). Strauss found the incidence in war hospitals to be 0.3 per 1,000, as compared with 1.2 per 1,000 in civilian hospitals. A pre-existing diabetes may be aggravated, accord-

ing to J. Noorden, and physical and emotional trauma were considered responsible for the onset of "war diabetes" (Lenné) in a few predisposed individuals.

Toxic Goitre.—The high incidence of toxic goitre in military hospitals noted by various authors was attributed to the mental and physical strain the soldiers had to undergo (White, Mott, Graham Brown, Beebe, Huddleson and Bailey, Tilling, Krehl). The incidence figures given diverge considerably, perhaps through personal variations in the use of the diagnosis. Cases have been reported in which the onset of the disease was immediately preceded by some severe emotional shock (Rohde, Richter, Rothacker).

SOME LONDON MEDICAL SCHOOLS AND "REVACUATION"

Newspaper headlines have a way of suggesting the absolute when it is the relative only which should be conveyed. Thus the announcement in one newspaper, "Medical Students Return to London," may have suggested a complete return to the central teaching hospitals from the home counties and further afield. That is not what has happened. There is a greater concentration of students in the metropolis than was the case a few months ago, but the position is not very different from what it was when a correspondent of this *Journal* undertook an inquiry of all the schools, the results of which were published on December 9, 1939 (p. 1155). A complete resumption at the hospitals in London is not possible so long as they are compelled to reserve one-third of their beds for civilian casualties, for the remaining beds may not be sufficient in all cases to provide clinical material for the students who would normally be in attendance. To take one example, at University College Hospital the arrangements for the summer term depend on whether further beds are opened at the centre; if they are not opened the new entry of clerks and dressers will be taught at the periphery, at what used to be Leavesden Mental Hospital, and will come into the centre for their second and third clinical years. The October entry of University College Hospital students went to Cardiff, and will stay there until they come back for their second year in London next October. The London (Royal Free Hospital) School of Medicine for Women has at present 163 clinical students working in London and only nineteen at its two associated hospitals in Hertfordshire; but at one of those country hospitals it is expected that many more beds will be open in the future, and in that case it is likely that a larger proportion of students will be working there instead of in Gray's Inn Road. The pre-clinical students of the metropolitan schools are for the most part remaining in the provinces, though the Middlesex contingent has returned to London from Bristol. But a strong intention is expressed in several quarters, notably at the London Hospital, to have the preclinical students back for the next autumn term unless, of course, air raids on London develop on such a scale as to make that course inadvisable.

Centripetal Movement

But, in general, as the out-patient and other services resume their normal aspect the dispersive movement is reversed. When our former article was written only one-fifth of "The London" students were actually remaining at Whitechapel; the proportion is now more than one-third. Indeed, if one counts as students at the London Hospital those who are at L.C.C. hospitals not far away and come to their own hospital in the afternoons for systematic teaching the proportion is two-thirds. The other third are at municipal and voluntary hospitals in the two sectors with which the London Hospital is associated, and it is considered that these institutions afford unrivalled opportunities for gaining experience in all branches of medicine and surgery. The London is with-

drawing its students from all upgraded institutions—that is, converted mental hospitals and public assistance hospitals—because these hospitals receive "transferred sick" from central London, and such cases, which have usually already been investigated and diagnosed, or are of a special kind, having been transferred so as to be under a particular specialist, are not satisfactory for medical education and may give the beginner a false perspective.

At St. Bartholomew's, again, the students who were originally living in small outlying hospitals have all been drawn into three hospitals, the biggest proportion being at Bart's itself. In October about 180 Bart's students were in London, either at the central hospital or adjacent hospitals, and 280 at hospitals in the sector outside London. The school is now very well organized at three hospitals: at Hill End, St. Albans, students to the number of about 140 are in their first clinical year; at St. Bartholomew's itself about 240 are spending one and a half years; and at Friern, New Southgate, about eighty are doing their final nine months. Lecture courses are being given at all three hospitals, and pathology is being taught in two sections: during the first year at Hill End, and later on at Bart's. While the students have their teaching spread over a greater number of teachers the arrangement has the advantage that some of the teachers are actually living in the outlying hospitals, so that there is much closer contact between them and the students than in peace time. On the other hand, the transfer of a number of consultants in the Emergency Medical Service from whole-time to part-time engagements has reinforced the teaching staffs available in London.

Bart's is not running any firms as it does in peace time, but the London Hospital is re-establishing the medical professorial unit and there are to be three medical firms each under the charge of two honorary physicians, and three surgical firms each under two honorary surgeons, also the aural firm, the cardiac department, with beds, and the department of obstetrics and gynaecology. The out-patient departments and clinics, including the maternity district of the London Hospital, are nearly at their pre-war level. At the beginning of February 150 additional beds were brought into use for ordinary civilian cases, and there will be thirty beds for obstetrics and gynaecology. Junior clinical students will spend their first twelve months in the hospital, working for six months in the wards, then three months in the special departments, after which they will take a course in pathology, the teaching of which has been centralized at the parent institution. After instruction in anaesthetics and in obstetrics and gynaecology it is considered that they will be senior enough to be attached for six months to one of the associated municipal hospitals, afterwards returning to the London Hospital to attend the out-patient departments and for revision work preparatory to their finals.

This statement of the position at the metropolitan schools does not pretend to be complete—several of the schools have not even been mentioned—but it does illustrate the tendencies now that the effects of the dispersion are wearing off, and something approaching normal, or as near normal as anything in war time can be, has been reached. Some of the deans, while alive to the disadvantages of having staff and students scattered over the breadth of whole counties, feel that much has been gained by the experience, and that a certain distribution of students for varying periods over other hospitals in the sector might well form a permanent feature of medical training. One also gathers that so far as can be foreseen the entry for next year will be up to the level of last.

Heparin.—The successful use of heparin in forty blood transfusions is described. In some cases it was added to the blood after it had been taken from the donor; in others it was injected intravenously into the donor.—Use of Heparin in Blood Transfusions. S. W. Sappington.—*J. Amer. med. Ass.* July 1, 1939, 113, 22.