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Clinical Notes and Cases.

Abstract of a Report on the Mental Division of the Welsh Metropolitan War Hospital, Whitchurch, Cardiff, September, 1917–September, 1919. By MAJOR E. BARTON WHITE, R.A.M.C., Officer-in-Charge, Mental Division.

THE Mental Division was opened in September, 1917, with 450 beds for N.C.Os. and men; and in September, 1918, a ward for 16 officers was added.

The total number admitted during the period under review:

From home service only	. .	officers, 3	. .	Other ranks, 193
Foreign service	„ 16	. .	„ 1561
Total . . .	„ 19	. .	„ 1754

Table I shows the associated factors discovered as causes in the total admissions of officers and men. More than one cause has often been found attributable. The association of general strain of war service has been omitted, except when this factor has alone been elicited, since it probably contributed in some degree to the condition of nearly all our cases.

Notes on Causation.

Heredity.—The large number with an insane inheritance is noticeable, and only those cases whose parent, grandparent, uncle or aunt, brother or sister has been certified insane have been included.

Mental stress.—Among other forms of mental stress, infidelity of the wife left at home appears to have had no small share in producing worry and insomnia. In nine cases only was any such cause the only factor established other than general stress of war service, but nineteen other cases were found where such stress was associated with malaria, dysentery, or severe wounds.

Prisoners of war.—The life led as a prisoner of war, as described both officially and by prisoners themselves, in many instances appears in itself sufficient to have induced mental derangement, and, indeed, in only one case of the seven admitted was any other factor found, and that was exhaustion from dysentery.

Head injury.—This consisted of falls and blows, and as the result of being buried by *débris* after explosion, with or without scalp wounds.

(Fractures of the skull have been included under "Brain Lesions," the assumption being that some such lesions, however microscopical, must co-exist.) Such cases were for the most part confused, and some acquired delusions.

Brain lesions and fracture of the skull were nearly all due to wounds admitted with or without foreign bodies.

TABLE I.

Cause.	The only factor elicited in—		Associated with other factors than general war strain.		Total incidence.
	Officers.	N.C.Os. and men.	Officers.	N.C.Os. and men.	
Insane heredity	1	121	1	46	169
Neurotic, alcoholic epileptic heredity	—	11	2	43	56
Previous attack	—	42	1	5	48
Mental stress	3	9	—	19	31
Stress of war service alone	8	61	—	—	69
Privation as prisoner of war	1	6	1	1	9
Alcoholic excess	1	19	1	21	42
Head injury without apparent brain lesion	—	19	—	21	40
Brain lesion	—	10	—	1	11
Other severe wounds	—	33	—	6	39
Heat stroke	—	17	—	11	28
Explosives	—	25	—	48	73
Malaria	1	53	1	32	87
Syphilis	1	14	—	58	73
Dysentery	2	5	—	18	25
Cerebro-spinal meningitis	—	2	—	—	2
Gas poison	—	9	—	8	17
Other diseases	2	30	—	33	65

Heat stroke appears to have been a very definite factor associated with general stress of warfare. From the cases seen, it seems to have left a condition of confusion and general apathy, with amentia, loss of attention-power and concentration. In many of the cases "heat exhaustion" might have been a better term, for only in nine cases was there a history of any so-called "stroke."

High explosives have helped to produce both forms of hysteria, but few such cases found their way into military mental hospitals unless some more pronounced psychosis had supervened.

Alcohol plays its part in all wars, whether in an attempt to drown a great mental conflict, such as the repression of fear, or as a more liberal part of the diet in obedience to the advice—"Eat, drink and be merry,

for to-morrow we die." Whatever the restrictions or facilities afforded, the statistics evidence a low percentage of cases that can be attributed to alcoholic excess. The incidence is perhaps smaller than might have been expected. There were no acute hallucinatory forms admitted due to this cause; the majority were either confused, or had delusions of reference, etc.

Malaria shows the second highest figure of all factors discovered. Nor does this figure represent the number of men who had an attack of malaria at any time during their service, but only the number whose psychotic symptoms definitely started during the attack. One is not inclined to put all the blame upon the hæmosporidia for the mental state that has so frequently followed or accompanied the disease. Quinine has been given in very large doses without question of idiosyncrasy, and it is surprising to find the number of people who are morbidly depressed after even small doses of this drug; and hallucinations, probably suggested and induced by deafness and tinnitus, are on record in civil life. In only two cases of several who had rigors while in this Hospital was the protozoon demonstrated in the blood. In thirty-two out of eighty-five cases, malaria was associated with one or more of the other disturbing factors mentioned in the table.

Syphilis.—The number of cases under "syphilis" represents those cases in which it has been definitely discovered that the disease has been contracted at some time or other. This will be referred to more fully under "General Paralysis."

Gas poisoning, apart from its physical phenomena, producing great mental distress, has no doubt contributed towards the production of states of depression and confusion connected, if not with any definite poison, with the insomnia and exhaustion so frequently seen.

Previous attacks.—One officer had had a previous attack of mental disorder, but was not certified insane; forty-seven men had been certified insane, and discharged from civil asylums prior to August 3rd, 1914.

Table II shows the disposal on discharge as permanently unfit for further service after medical board, and those remaining resident in hospital on October 1st, 1919, arranged according to mental disorder.

Notes on the Forms of Mental Disorder.

Imbeciles and defectives.—The term "supposed accepted fitness" for service has been used. When passing through the wards and gardens of the Mental Division one did not find the majority of the patients the well-built, symmetrically featured, and intelligent looking youths that might have been expected. True, there were many of these, but the large number of obviously congenitally deficient caught the eye first; stigmata of degeneration were found also in a high proportion of those whose disability came under the heading of the other psychoses. The

high percentage of boys and men taken into the Service either imbecilic or definitely mentally deficient is regrettable.

A few may have given a good account of themselves in the line, but these must have been exceptions. Though the majority were in labour battalions, from accounts received from combatant officers many of them appeared to have caused considerable inconvenience, if not definite danger, in the front-line trenches, and also at the base, where they were always a source of anxiety.

TABLE II.

	United Kingdom.					Expeditionary Force.					
	Recovered.	Certified.	Died.	Transferred, etc.	Remaining.	Recovered.	Certified.	Died.	Transferred, etc.	Remaining.	Total.
Imbecility	6	6	—	1	1	28	13	—	3	4	62
Congenital mental deficiency	31	9	—	—	2	149	68	—	27	30	316
Moral insanity	—	3	—	—	—	—	7	—	—	—	10
Melancholia	34	6	—	2	1	158	51	3	52	45	352
Mania	9	5	1	—	—	47	15	2	10	18	107
Manic-depressive	1	2	—	—	—	9	6	—	3	—	21
Delusional	9	5	1	2	2	82	82	1	35	49	268
Confusional	4	3	2	1	—	72	24	2	30	42	180
Stupor	1	2	1	—	—	11	2	—	1	7	25
Delirium	—	—	—	—	—	—	—	1	—	—	1
Dementia, secondary.	1*	3	—	2	—	7*	10	2	1	—	26
General paralysis	2*	9	1	—	1	12*	51	13	6	7	102
Cerebral syphilis	—	1	—	—	—	1	3	—	1	4	10
Dementia præcox	2*	8	—	2	—	5*	59	—	12	21	109
Insanity with brain lesion	—	—	—	—	—	4	2	1	1	—	8
Insanity with epilepsy	3	1	—	—	—	21	10	—	5	5	45
Functional disorders.	5	—	—	2	—	55	9	1	4	40	116
Not insane	—	—	—	—	—	10	—	—	—	—	10
Absentees	—	—	—	—	—	—	—	—	—	—	5
Totals	108	63	6	12	7	671	412	26	191	262	1773

Many could neither read nor write nor even make simple additions. Several had never been to school, and the appearance of their degenerative stigmata has been pitiable in uniform. A few were found to be encumbrances at an early date; others broke down with some superimposed psychosis produced by the change in their mode of living and army discipline, or ultimately by the effect of exposure to shell-fire.

* Found fit to live at home, though not recovered. There were no deaths amongst the officers, and there were none remaining resident on October 1st, 1919. *The absentees* were men who broke their parole while waiting for their Invaliding Board, and in whose cases there was delay in obtaining the necessary documents to so dispose of them.

While many of them may have been expected to be hardly sensible to such stimuli, the majority that have come under observation appear to have felt their position acutely. Some deserted in a panic, others attempted suicide, or indulged in self-inflicted wounds.

The seven cases of *moral insanity* appear to have been mostly old gaol-birds, and it is difficult to be convinced that their mental condition was in any appreciable way aggravated by their service.

Melancholia affords the second highest number of all the forms of mental disease admitted, and the highest of those acquired during the war, *i.e.* excluding the mental defectives. They formed 19·6 *per cent.* of all admissions. The ratio of melancholia to mania is also enormously increased as compared to the ratio of these states before the war. We believe that this is in part due to the incidence of malaria, from which so many of our cases were suffering at the time of the onset of their psychosis, and also perhaps in part to its treatment. The percentage of actively suicidal cases was far more frequent than before the war amongst the depressed, and eight cases were admitted with healed, or part-healed, self-inflicted throat wounds.

Protracted cases of dysentery—by producing a profound exhaustion (possibly more than as a result of toxins)—has been counted responsible for several of these cases, nine of which had been previously certified as insane and discharged recovered to civil life before the war. Of these melancholics, over 53·9 *per cent.* were sent home recovered during the period under consideration.

These cases differed in no way from those seen prior to the war. Few of them were acute. Seven of them had been previously certified insane and about one-half had a psychopathic inheritance.

Manic-depressive insanity.—In twenty-one of the foregoing states of excitement and depression a definite history of true alternation was established. The majority were in the excited state on admission.

Delusional insanity.—There have been a large number of delusional states in the cases admitted. Rather over half of them were able to go home in from two to six months; the remainder had to be certified.

These cases, whether following alcoholism, or the combination of several factors, were unusually interesting. They were first thought to be paranoïdal states which were not expected to recover. The delusion of accusation of being a German spy was frequent. Persecution by superior officers perhaps was brought about by unaccustomed discipline on a sensitive mind. The very definite removal of conditions which may have brought about this state probably had much to do with their recovery. We had to deal with several dangerous paranoiacs, and much trouble was made by their agitation amongst other patients, and their well-planned complaints, both in writing and getting their letters posted to eadquarters, and verbally to inspecting general officers.

Confusional insanity.—There were many cases of confusion, and one would have liked to have had many of them under observation for a far longer period. Many no doubt were early cases of dementia præcox. The majority, however, became well enough to be sent to their homes. These cases had a history of heredity of either psychopathic or neuropathic origin, combined with exhaustion from wounds or from malaria, etc. One or two were associated with alcohol in susceptible subjects. Over 10 *per cent.* of the milder confusional states went to their homes.

Stupor.—There were twenty-five cases which have been collected under this head, but only a few remained to be certified, the majority making complete recoveries. Five had to be fed artificially for some time, and three of these recovered. One case who had remained stuporose for five months was anæsthetised, and a strong current applied to groups of muscles. All gave strong reactions. The current was then applied to the larynx. The patient used his voice, but spoke no words. After the current was removed we asked him a question, to which he again made some inarticulate noise and lapsed again into a state of stupor, in which he was transferred some two months later to a civil mental hospital after discharge from the service.

Delirium.—Only one such case was admitted, and he was suffering from lobar pneumonia (which unfortunately was not recognised prior to admission from a local hospital), and died in forty-eight hours.

Dementia (secondary).—These cases were secondary to alcoholic insanity, or had been previously insane, the dementia supervening rather sooner than usual with the second attack.

General paralysis of the insane.—Syphilis was definitely established to have been contracted in 49 cases out of 102 admitted, the positive Wassermann test not being included as a definite positive proof. Twenty-three showed a history of psychopathic or neuropathic inheritance.

Not more than one or two showed any marked stigmata of degeneration, and, judging by their pre-war occupations and also their standard at school, they compared favourably with the other psychoses.

We know in civil life how head injuries appeared to act as a strong exciting cause in determining the onset of the initial symptoms, and have had to give evidence concerning such causal factors to help determine the question of compensation. Such head injuries were found to have occurred in thirteen of our present cases.

The Wassermann test was made on all of these cases. The following table gives the reaction:

A.	In 46	+	in serum,	+ in cerebro-spinal fluid.
B.	In 22	+	,,	— ,, ,,
C.	In 29	—	,,	+ ,, ,,
D.	In 5	—	,,	— ,, ,,

All those under "D" were repeated after an average interval of three

to six weeks, and were then + in the cerebro-spinal fluid in all cases and in the serum in four of the five.

The frequency of a positive reaction in the cerebro-spinal fluid with a negative reaction in the blood-serum is noted. It may be that the anti-syphilitic treatment had rendered the general system free, but has been unable to take effect on the nervous system when once this has been invaded.

The Nonne-Apelt reaction was performed in ninety-two cases, and in all but two was positive. For information regarding Stanford's nitrogen contents estimation of the cerebro-spinal fluid reference should be made to *Reports from the Chemical Laboratory: Cardiff City Mental Hospital*, No. 2, 1919.

Cerebral syphilis.—Nine cases were recognised as suffering from cerebral lues. The patients showed clouding of consciousness and confusion with early dementia. Their reflexes were affected to some extent in every instance, and there was loss of facial expression, with labial tremor. They did not show the familiar well-marked disturbances of the paralytic; excitement and exaltation were absent in every instance. In all the Wassermann test was positive.

Dementia præcox.—All three forms of this psychosis were admitted, the majority being, perhaps, of the paranoidal type, and katatonia the most uncommon. In about one-third of the cases was a psychopathic inheritance established.

Insanity with brain lesion.—There were eight of these, including cases of severe fracture of the skull. Scalp-wounds from severe blows, with or without naked-eye injury to the bone and periosteum, have been shown to produce bruising of the dura with varying degrees of cortico-meningeal hæmorrhage. Such patients complained of giddiness and headache (which is nearly always frontal), and showed a general mental dulness. Increase in tendon-jerks was nearly always present (*vide* Jefferson, *Brain*, vol. xlii, Pt. II).

Insanity associated with epilepsy.—Several cases admitted diagnosed as epilepsy had no epileptic manifestation since returning from overseas and for a period of several months after admission to this hospital, and this may support the theory of those who believe epilepsy to be almost entirely functional.

Those cases that had frequent fits since admission were treated with intra-muscular injections of collosol palladium, in connection with which there were none of the depressing sights of degradation produced by continuous administration of the bromide salts.

Hysteria.—Under this heading are included the so-called shell-shock cases that found their way into the mental division. Among these twenty-six there were cases of both conversion hysteria and anxiety hysteria. There were several constitutional neuropaths.

Psychasthenia.—Nine cases diagnosed under this heading are also included in the shell-shock cases.

Neurasthenia.—There were no unusual symptoms, and after an average residence of two months in hospital the patients were discharged the Service and sent to their homes.

Mental instability.—These cases showed no definite psychotic symptoms on admission. They were given to reacting in an exaggerated manner to stimuli. They were often the cause of discontent among the patients in the same ward, and one was not sure what they might do next. After a period of rest and control they were allowed on parole, and when their behaviour had been normal from one to two months they were discharged to their homes, with the exception of three cases in which psychotic symptoms supervened—or, should we say, came to the surface.

Notes on Treatment.

The results of obtaining cases early for treatment have been evidenced. This hospital, which, in its civil capacity, is the mental hospital for the city of Cardiff, is modern and well equipped for the care and treatment of the mentally afflicted.

Female nursing staff has been employed: a sister, staff nurse and three or four probationers in each ward of between forty to fifty beds, with two or three orderlies, have been the usual complement. This has been conducive to better behaviour and restraint of conduct and speech among the patients, and the atmosphere of hospital has been maintained.

Parole for convalescent patients has been very useful in sorting out cases individually, and gradually testing their self-reliance and stability.

Rest in bed, verandah treatment, and additional diet have been beneficial in certain cases, especially in those of depression, confusion and stupor. Continuous warm baths have been used in cases of prolonged excitement, and where there has been much agitation, with benefit. Extracts of the ductless glands—pituitary and thyroid—have been useful in cases of stupor and confusion, combined with massage.

Massage has been most useful in cases where there has been much loss of muscle tone and sluggish circulation.

Some cases have shown relief by suggestion, though owing to lack of space there has been difficulty in obtaining privacy and silence for this purpose. Moreover, the office-work of a mental division leaves but little time for individual attention.

Exercise and recreation have been well provided for the convalescents in the form of concerts, bioscope shows, and occasional outings in the country; while several men on parole have worked on the farm and garden during the morning.

Army discipline has helped in many ways in their management, but there has been collusion and combined action among the paranoidal and delusional cases to overcome authority, though without any untoward incident of note.

There has been no case of suicide or homicide, largely owing to the conscientious interest displayed in their duties by the staff.

Deaths.

There were thirty-two deaths during the two years under review, including fourteen due to general paralysis, two to intracranial growths, and one after shrapnel wound of the brain. Two cases died of exhaustion after mania.

Remarks.

Though stress of war and its exhaustion have been mentioned, and this factor alone was elicited in a fair number of cases, there is no proof that exhaustion, *per se*, will produce any of the psychoses. If we could probe each individual case, no doubt we should find some hidden complex, long pent up, probably since long before the war, had been released by one or more factors incidental to war service, and thus the conflict could be recognised. Such a factor, by upsetting conscious control of repression, such as repression of fear, would bring about a psychotic state, particularly in constitutional neuropaths, so many of whom found their way into the services.

The State, which is largely dependent for its welfare on the fitness of its manhood, and has to provide directly or indirectly for the maintenance of the unfit, would do well to consider more seriously the problem of the mentally unfit—mentally unfit both individually and progenitally. The war has shown us that with far earlier treatment more can be done towards recovery.

In conclusion, my thanks are due to Lieut.-Col. E. Goodall, C.B.E., Officer-in-Charge of the hospital, for permission to make this report; to Capt. G. Harper-Smith, R.A.M.C., for valuable help in collecting cases which had suffered from malaria; to Capt. H. A. Scholberg, R.A.M.C., Pathologist to this hospital, for the Wassermann tests; to Dr. R. V. Stanford, M.Sc., Ph.D., Research Biochemist to the hospital, for his investigation and report on the nitrogen content of the cerebro-spinal fluid; and to Mr. J. O. D. Wade, M.S., F.R.C.S., Consulting Surgeon to the hospital.

Cases illustrating briefly the Different Forms of Mental Disorder.

(1) *Imbecility.*—Pte. A. B—, æt. 20. Civil occupation—*nil*. Father in county asylum; mother healthy; brother and sister feeble-minded. Stunted growth; slight asymmetry of bullet-shaped head; features coarse; hair coarse and untrained; large flat ears with thin helix and Darwin's tubercle evident; palate

narrow and lofty. Unable to read or write; says "twice three = nine." Missing after short bombardment. Found wandering three days later, refusing to give account of his actions. Sent home "N.Y.D. Mental." Mischievous and irresponsible in hospital; behaviour improved with discipline. Boarded, discharged, and sent to his mother.

(2) *Congenital mental deficiency.*—Pte. C. D—, æt. 33, looks 16. Standard II at school. Helped father wood-cutting. Father, mother and brother insane. Normal height; no hair on face (on head fine and silky); prominent mammary glands; arms and thighs rounded. Pelvic girdle wider than shoulder girdle; rudimentary external genitalia; only one testicle descended; has never experienced sexual desire; voice high pitched. States he worked as a female domestic servant for some months. Simple and childish; depressed and apprehensive after exposure to shell-fire. Depression and apprehension disappeared in two months. Worked in ward kitchen; on parole; discharged to his home.

(3) *Moral insanity.*—Pte. E. F—, æt. 31. Standard III at school; casual labourer. father inebriate; brother epileptic. Had been in prison for theft. Apparently troublesome as a recruit: found with other men's property; reported by N.C.Os. as untruthful and unreliable; refused to obey orders. Court-martial; found "not responsible," and sent home as a mental case. Mischievous; could not be trusted. Outbursts of violent temper; broke much hospital glass; impulsive towards staff; attempted to escape; given to theft; little idea of right or wrong. Boarded, discharged, and certified for transfer to asylum.

(4) *Melancholia.*—Cpl. G. H—, æt. 29; single; clerk in drapery store. Parents and grandparents healthy; sister insane after childbirth. Contracted malaria; treated by large doses of quinine. Became very depressed; could not sleep; solitary and no desire to do anything; attempted suicide by cutting his throat. Anæmic and wasted on admission; refused his food; said he was "no use," and deserved to die because he had failed to do his duty. Sleeping badly; suffered from constipation and headaches. Put in bed on open-air verandah; on extra diet for two months with general massage during second month. Gradually improved; began to converse more freely and realise his condition. In three months from admission was up and about the garden; sleeping and eating well; helped nurses in ward; put on parole during afternoons. Had no recurrence of fever in hospital. Discharged after board to pre-war occupation.

(5) *Mania.*—Pte. I. J—, æt. 37; married; labourer. Father insane; mother inebriate. Previously discharged from asylum, 1910, after mania. Under fire periodically for three months; after attack by enemy began to run up and down trench shouting and laughing. Admitted in excited and exalted state; exaggerated movements of large joints; incoherent speech but answered questions as a rule. Continually banging on his door, and destructive to his bedding and clothing and neglectful in habits; singing snatches of popular songs without break during the night. Continuous hot baths at 100° F., starting at one hour daily and increased to several hours. Became quieter, and showed more attention; took his food better. In seven weeks walked round garden during morning; lost 17 lb. in weight since admission; extra diet (milk, eggs, etc.). Discharged recovered in five months, when his weight was 5 lb. above that on admission.

(6) *Manic-depressive insanity.*—Pte. K. L—, æt. 41; single; labourer. No history of insane heredity found; previous attacks 1907, 1910. In 1910 there is evidence that he was in a state of mania; in 1911 he was depressed, but was not certified. Admitted from overseas; exalted, excited, noisy, and restless; thin and pale. Became quiet in a few days, with occasional outbursts of excitement. In six weeks he seemed fairly well, and his discharge was considered, but he became dejected and solitary, and inclined to refuse his food. These symptoms increased, and he was discharged after board in seven months and certified.

(7) *Delusional insanity.*—Pte. M. N—, æt. 30; single; clerk. Mother's sister insane for two years; one brother-feeble minded; two healthy sisters. Had little sleep for four days during an advance in France. Reported to his N.C.O. that the men of his company were accusing him of being a German spy. Became very excited and resistive. Sent to Netley, and transferred next day. Suspicious and restless; made the same accusations as in France; saw hidden meanings in ordinary events referring to himself. These entirely disappeared after three months' rest and extra diet, and he was discharged recovered.

(8) *Confusional insanity.*—Pte. O. P—, æt. 27; single; draper's assistant. Father drank heavily before marriage. Was very upset by shell-fire, but did not complain. Began to sleep badly; found he could not carry out instructions owing to losing his memory. Remembers nothing more till he was on hospital ship; reported by M.O. to be confused and restless, refusing his food, and unable to account for himself. On admission he appeared to have improved, and said he thought the men noticed that he was a coward; he complained of frontal headaches and constipation. He was put to bed on verandah with extra diet. Gained 5 lb. in weight in one month; gradually improved and when allowed up, spent his time in the garden and helping nurses in ward. When discharged as recovered there were still some three or four days in France he could not account for.

(9) *Stupor.*—Pte. Q. R—, æt. 32; single; clerk. Reported sick with headaches and loss of energy; went back in the line; a week later was found wandering, unable to account for himself. When in hospital at the base became silent and anergic; lay in bed unable to help himself in any way; refused all food. Was in a state of complete stupor when admitted; lay still in bed staring at ceiling; insensitive to pain. Was anæsthetised; used his voice but did not speak. Did not improve, and after seven months was discharged to civil mental hospital.

(10) *General paralysis.*—Pte. W. X—, æt. 27; single; coalporter. Father alcoholic. Contracted syphilis 1911; enlisted 1914; served in Gallipoli and France. October, 1918, became very excited, exalted in manner, and emotional. On admission restless, destructive to clothing, and neglectful in habits. Pupils unequal, L.>R., very sluggish to light; knee-jerks exaggerated; much loss of muscle tone. Romberg's sign; face expressionless; speech slurred; paresis of lips and buccinator right side; tremors of hands and tongue. Wassermann + in serum and cerebro-spinal fluid. Nonne-Apelt +, N.N. 28. Cell count = 25 per c.mm. At times he stated he was "King of France," and at others, "Lord of the Earth." He was degraded in habits, and tore his bedding. In this state he was discharged to an asylum.

(11) *Cerebral syphilis.*—Pte. B. A—, æt. 33; single; painter. Father in asylum twice "through drink." Contracted syphilis 1914. Served in Egypt and Palestine. Reported dull and lethargic; and complaining of headache and malaise; unable to do his duties, October, 1918. Admitted in a state of confusion. Pupils equal and contracted, reacted little to light; knee-jerks dimininished equally; tremors of hands and tongue; memory very defective. Sat about all day unable to occupy himself; slept heavily at night; became demented fairly rapidly, and neglected himself in every way. Wassermann test was — — in serum, and "retarded" only in cerebro-spinal fluid. One month later cerebro-spinal fluid was — —. He was discharged in this state to an asylum.

(12) *Dementia præcox.*—Capt. B. B—, æt. 26; single; 6th form, public school. Eleven years ago when Resident House-Physician at Bethlem Royal Hospital, London, we knew his father as a G.P.I. He died there. Strong healthy lad with no stigmata. When overseas became suspicious, and wandered about alone. On admission he was suffering from visual and auditory hallucinations; was destructive to his clothing, and faulty in habits; would attempt to stand on his head, and strike various stereotyped attitudes. He was negativistic; rather exalted, and inclined to be impulsive; spoke in a pedantic manner with staccato voice; lapsed frequently into a state of confusion. There was no loss of perception-power. He was kept in bed at first, and had extract of pituitary in small doses. He became more reasonable though peculiar antics continued. He was transferred to a private institution.

(13) *Insanity with brain lesion.*—Cpl. B. C—, æt. 28; single; clerk. No neuropathic inheritance; previously healthy. Shrapnel wound left temporo-sphenoidal region six months previously; healed on admission. Complained of dizziness and acute headache over whole of left side; loss of memory, and inability to collect his thoughts; was confused, depressed, and unable to give a connected account of himself. X-ray showed foreign body just above the left lateral sinus. Operated on by Mr. J. O. D. Wade, M.S., F.R.C.S., Consulting Surgeon to the hospital. Foreign body removed; wound drained; healed rapidly. Headaches gradually disappeared; memory returned almost completely; no attacks of vertigo. Patient discharged recovered to his previous occupation.

(14) *Hysteria.*

Conversion hysteria.—Pte. B. F—, æt. 33; married; three children; photographer. Wounded slightly in leg, June, 1918; under shell-fire for long periods.

Reported to have become very excitable, and complaining of great pain over scar; was tremulous and restless; seven days later he became mute. In this condition he was admitted. He would write readily. He complained of frontal headaches and dizziness; he was hypochondriacal generally; he would often limp with the leg that had been wounded. He was examined by the consulting surgeon who found no cause for limping. Pupils large and very sensitive; knee-jerks very exaggerated; other reflexes normal. Several attempts were made to get him to speak, and finally, after about six weeks, he was persuaded that he could speak, and after repeating a few words could string a sentence together. He contracted influenza, and again became mute for five or six days, but there was less difficulty then in persuading him that he had not lost his voice. He had no further trouble when he got up after the attack of influenza, and appeared to have forgotten the scar on his leg.

Anxiety hysteria.—Cpl. B. G—, æt 29; single; butcher's help. Reported to have had "fits" in France. Admitted in a state of confusion; stated that he remembers waking up from a dream, and being shouted at and shaken by some orderlies and a nurse; this was after a bombardment. On admission he was very shaky and timid; pulse rapid and rather full; hands were cold and blue and trembling. Was possessed of some unreasoning fear; had to be reassured as to the identity of strangers, where he was going, and who would be there, etc. He had headaches, and said the "light hurt his eyes." He dreamed every night of being forced to kill someone; confessed to the chaplain that he had killed one of the enemy, and could not "get over it"; there was very slight bilateral thyroid enlargement, which he was certain had not existed before the war; his terrifying dreams persisted, nor could he reconcile with his conscience the fact of his having shot one of the enemy. He slept badly, and had obviously lost weight. He was put to bed on the verandah, with extra diet; rarely was he given any sedative at night. General massage was applied, and his colour improved; the pulse became steadier, and he was soon sleeping better, but it was some ten weeks before he entirely lost his dreams, and could discuss having killed one of the enemy without signs of distress. It is of interest that the thyroid enlargement had almost disappeared in three months.

(15) *Psychasthenia.*—Pte. B. H—, æt. 31; married; clerk. Had been an athlete. Was in much fighting in 1915; did not get wounded. In 1917 a shell fell outside the hut he was in, and blew in a portion of the side. He was writing to his wife. The letter was destroyed by *débris*, but he was not hurt beyond being shaken. Next day he believed the destruction of the letter he was writing symbolised the death of his wife at home at that time. He became sleepless, and obsessed with this one idea. On admission he was pale, and appeared exhausted; his sleeping improved, and he became less restless; he told me he thought his wife must be dead; it is true he had not heard from her since his "shock." His wife was sent for, and beyond an almost constant fear of losing her he rapidly improved. He gained over a stone in weight during his five months in hospital. He was then sent home with his wife, and wrote since to say that he was back in his "old job," feeling "very much better."

December, 1919.—Since the completion of the above report the Mental Division has been closed.

There were remaining resident on October 1st, 1919, 279 men, and since that date 86 more have been admitted.

Total discharges and transfers from October 1st, 1919, to December 10th, 1919: 365. Total admissions from September, 1917, to December, 1919: officers, 19; other ranks, 1840.

Disposal:

Total recovered	Officers	15	Other ranks	914
„ certified	„	3	„	533
„ died	„	—	„	36
„ transfers	„	1	„	352
„ absentees	„	—	„	5
Total	„	19	„	1,840