of postinfective, postpuerperal and similar psychoses, and in hebephrenic-catatonic dementia praecox, the urine constantly shows a substance positive to Millon's reaction. This is not free phenol or an aromatic acid or tyrosin. Accompanying the substance, which seems to be due to a destruction of liver cells, are other substances characteristic of hepatic degeneration such as urobilinogen and urobin.

R. G. G.

PSYCHOPATHOLOGY.


Chronic infective processes in cases of mental disorder are generally of long standing. They do not merely include focal infections in the form of diseased teeth, tonsils, nasal sinuses, gall-bladder, etc. Such a process implies a general biochemical disorder, the full extent of which may not be fully realised, and of which one example may be a calcium deficiency. It has generally been preceded by an acute infective process more or less well marked, which subsides but leaves behind areas of unresolved infection, and in these areas general poisoning goes on. Here are emphasized, and illustrated by specific cases, mental disorders associated with unresolved infection such as that following measles, scarlet fever, encephalitis lethargica, pneumococcal, intestinal, influenzal and other septic infections, sometimes pure and in other cases mixed. Why the acute infective process associated with these diseases should leave behind it areas of unresolved infection the author does not know, but supposes that there may be some local maldevelopment of structure together with a general biochemical disorder. As regards influenza and mental disorder some interesting conclusions have been reached. (1) In persons without psychotic inheritance but with pre-existing septic states in the head, an attack of influenza by causing an acute exacerbation of the old pathological process may precipitate serious mental disturbance, even though constitutional symptoms of influenza may be slight or absent. (2) The mental symptoms and the corresponding pathological conditions of septic foci with deficient or defective drainage may continue indefinitely. (3) The usual influenzal symptoms displayed by a relatively healthy person may show considerable differences from those occurring in persons with an existing septic process in the head. (4) Within the skull, therefore, pathological processes may exist, the extent of which may determine the degree of mental symptoms displayed.

The cases of encephalitis lethargica investigated have fallen into two main types—the chronic and the acute. The former were cases in which the patients had passed into a chronic stage, and with progressive mental and physical deterioration became certified after many years. In these cases areas of unresolved infection had been operating over a long period of time. On admission,
the acute cases showed acute mental symptoms with definite evidence of ocular palsies, ptosis, pupil disturbances, Parkinsonism, etc. In some, treatment of gross dental sepsis was followed by mental and physical improvement, by recovery and satisfactory reports subsequently. In others, chiefly adolescents, septic tonsils, adenoids and infected nasal sinuses were found. On removal or drainage mental and physical improvement and discharge followed. In these there was definite pathological conduct and in the females menstrual irregularities. Following the removal of the septic disease in the head menstruation became regular and conduct normal.

C. S. R.


The authors' published studies on the subject led to the conclusion that focal infection could not be regarded as the essential etiological factor in the functional psychoses, and that surgical detoxication resulted in no greater a number of improvements or recoveries than occurred in patients not operated on. The adverse criticisms of Hunter are discussed and refuted. There are three important questions requiring consideration in dealing with the relation of local infection to mental disease:

1. Is focal infection the specific cause of the functional psychosis?
2. Can the surgical removal of foci of infection alone bring about improvement and recovery of patients with mental disease?
3. Is focal infection of importance in mental disease?

Kopeloff and Kirby's studies indicate clearly that the first two questions must be answered in the negative. No essential differences were noted between the group receiving the usual hospital treatment and the members of another group receiving surgical treatment to remove the foci of infection. In a word, operative procedure alone was not responsible for mental improvement or recovery. With regard to the third question, it can only be said that so long as there exist no satisfactory criteria for evaluating the relative importance of each of the factors which enter into mental disease we must suspend judgment and gather further facts or develop better methods.

C. S. R.


From the consideration of 114 cases it is concluded that in mental disorders gastric dysfunction, especially hyperchlorhydrie, is present to a much greater extent than in normal individuals. The importance of free hydrochloric acid as a bactericidal barrier has been proved and the relationship between this fact and that of the production of gastritis has been established. Adequate
bacteriological methods show that oral sepsis can be traced throughout the alimentary canal. The degree of gastric infection does not increase the expectation of invasion of the intestine. Anaerobic methods are essential if the full significance of the special types of infections present in mental disorders is to be realized.

C. S. R.


Mental deficiency is a maladjustment due primarily to biological defect causing mental subnormality, due secondarily to psychological or social factors or both. Where adult intelligence does not exceed a Terman age of six or seven—as in the idiots and imbeciles—the primary biological factors in themselves constitute mental deficiency. Where the Terman age lies approximately between seven and eight or nine, it is the presence of the secondary factors that determines whether a given individual will ultimately be classifiable as legally defective or as merely subnormal.

The primary biological factors determining subnormal intelligence are manifold; mental defect is not a unitary condition. Of the five groups—hereditary, blastophoric, congenital, natal, and acquired—the second and third are especially worthy of further investigation by geneticists, obstetricians and others. Hereditary factors will demand a eugenic solution; blastophoric and somatic factors a euthenic solution. At the moment it seems wiser to consider both methods of attack, with the emphasis perhaps on the latter.

Mental defect is most practically considered in terms of intelligence and social behaviour.

The psychological factors complicating subnormality consist, for the most part, of anomalies of temperament and character; to a lesser extent of psychotic and psychoneurotic reactions. At the moment, the most practical method of rating temperament is to attempt an evaluation of emotional traits that have been selected on a purely situational basis. Anomalies of temperament and character are then the exaggeration of individual emotional traits or of a disharmony between them, and are the result of social factors in the environment interacting on the increased suggestibility of the subnormal. Failing prevention by general social and educational measures, such anomalies will require individual corrective treatment by parent, teacher, probation officer, or in the last instance by the psychiatrist aided by his social workers.

Social methods of treating and controlling mental deficiency have the following aims. The biological determinants of subnormal intelligence must be kept in check by positive and negative, eugenic and euthenic, measures. The subnormal must be socialized to the full extent that his intelligence allows. A third aim is to control the environment, and to avoid features which tend to induce character anomalies or precipitate antisocial reactions. Fourthly,
custodial and antisocial types must be segregated. Every effort must be made to socialize as many as possible of the latter by establishing a systematic, continuous, progressive chain of contacts with the outside world.

AUTHOR'S ABSTRACT.


The technique of the Arneth blood-count is explained. From their work the writers conclude that this procedure has proved itself to be an aid to diagnosis in many cases. In several cases where physical examination has been either impossible or unsatisfactory, a low Arneth count has rendered probable a diagnosis of tuberculosis before physical signs have been discoverable by other means. To those engaged in the work of a mental hospital, any method of assessing the progress of a tuberculous patient is valuable. Its value is the more apparent when the measure is easy of application. The Arneth count enables the physician to segregate at an early date his infected patients, and to lessen the incidence of a disease which finds a favourable soil in the mentally defective population.

C. S. R.

[139] Congenital wordblindness and agraphia in a feebleminded subject (Un cas d'alexie et d'agraphie congénitale chez un débile mental).—O. Decroly. Jour. de Neurol. et de Psychiat., 1929, xxix, 346.

A detailed study of a young boy of defective intellect, whose major disability concerned the faculties dependent upon vision, especially reading and writing. He is not to be included among the cases of pure congenital word-blindness of Hinshelwood on account of the co-existence of other intellectual defects. Although the author does not anticipate a complete development of the ability to read and write he has noticed a definite improvement in this direction as the result of careful education.

M. C.


The author discusses the clinical course and pathological observations in two cases, both of which showed the changes found in Alzheimer's disease; they differed, however, in that one occurred at the usual age, whereas the other occurred early in life.

Case 1. A man, in whose heredity there was a tendency to senile psychosis and whose history previous to the onset was essentially unimportant, began to
ABSTRACTS

show signs of mental disturbance at the age of 62. These consisted at first of spells of dizziness, defects of memory and disturbances of speech. Following an apparently complete remission, the symptoms recurred for another short period, to be followed by a less complete remission of a few months. This, in turn, was followed by an interrupted progression of the disturbance of memory and mild paranoid ideas. On admission (fifteen days before death) he was semistuporous, and showed only slight indication of paresis on the right side with questionable pyramidal tract signs. There were disturbances of speech in the form of aphasia and paraphasia, as well as a tendency to logoclonia. There was definite apraxia, difficulty in obeying commands other than of the simplest type, and disturbances of writing and copying. He was restless, impulsive and untidy in his habits; the Wassermann reactions of the blood and cerebrospinal fluid were negative. The fluid did not show any pathological changes other than slightly increased permeability. Postmortem examination showed a carcinoma of the cecum and mild arteriosclerosis. The brain did not show gross changes, but histologically it revealed the following outstanding features: numerous plaques and Alzheimer cell changes throughout the cortex, with the exception of the occipital pole, which did not show the latter; degenerative phenomena in the ganglion cells and neuroglia, especially marked in the basal ganglia, and mild degenerative phenomena in the vessels of the cortex and the pia, but no signs of arteriosclerosis or inflammation. The choroid plexus showed changes that at the age of the patient are to be considered mild and non-specific. The presence of rich deposits of iron completes the picture of a pronounced degenerative disease of the brain.

Case 2. Following an infectious disease at the age of seven, the patient, who is said to have been normal before, showed a gradually progressing mental disorder expressed in inefficiency in school work and social tendencies. This chronic picture led to periods of excitement, restlessness and impulsiveness, which necessitated confinement. A further mental decline took place, with acute exacerbations alternating with periods of quiescence. Following a period of intense disturbance, characterised by muscular tension, mutism alternating with rambling speech, impulsiveness, extreme untidiness, confusion, apprehensiveness and so forth, there was another period of quiescence during which the patient was taken home, where he remained for more than four years. During this period he is said to have been fairly tractable although needing somewhat constant supervision. This was followed by a final exacerbation which began about six months before death, apparently associated with a slight respiratory infection and with mental symptoms that were like those of previous occasions. They were characterised especially by extreme restlessness, confusion, untidiness, wandering at night and disturbances of speech. Death occurred from exacerbation of an old tuberculous process. At postmortem examination there was found an acute tuberculous process, but not any other gross lesions. The brain showed histologically: (1) an
extremely advanced, typical picture of Alzheimer's disease, with numerous plaques, Alzheimer cell changes and fibril degenerations, and associated with it a marked nonspecific degenerative process throughout the cerebral cortex and basal ganglia, the cerebellum being intact: (2) a condition of the choroid plexus consisting of an extensive degenerative process of the vessels of the villi. The lumen in most of these was completely obliterated by concentrically arranged rings of structureless substance in the walls. Some of the vessels, however, were still patent and contained blood. The connective tissue surrounding the blood vessels (especially the capillaries) was greatly increased and showed signs of an advanced degenerative process. The epithelial layer was represented by a thin margin on the periphery; the individual cells were degenerated.

According to the authors we must discard the notion of Alzheimer's symptom-complex being particularly bound to a certain age, and from a pragmatic point of view there is not any particular advantage in regarding the whole group as an expression of presenile changes. Etiologically and pathogenetically we know little about the process of senility other than that it may be produced by some unknown metabolic changes and the possibility of a disturbance of the choroid plexus producing a picture of this type in one case offers a stepping stone toward discovering such a common factor. The results of recent investigations into the physiology of the plexus, and the possible rôle it plays in the exchange of substances between the blood and the cerebrospinal fluid, give valuable clues as to the direction to be followed. The changes which take place with age, even normally, may be of further assistance.

R. M. S.


After some historical survey, it is pointed out that the diagnostic criteria of general paralysis and its fatal prognosis were developed many years before the days of Argyll Robertson and Wasserman. Many cases now included under this heading would not formerly have been, because they did not resemble general paralysis. The introduction of the Wasserman reaction has certainly helped to eliminate some doubtful cases but has brought fresh errors in its train. It will probably be conceded that complete recovery from the signs and symptoms of cerebral syphilis means meningo-vascular disease. Of those conditions which resist treatment, some are due to parenchymatous syphilis, and some are the result of irreparable destructive lesions caused by processes in the vessels or meninges. There is a tendency to accept certain isolated phenomena as unequivocal evidence of parenchymatous syphilis, viz., the Argyll Robertson pupil, loss of the knee- and ankle-jerks, and primary optic atrophy. These, however, may occur as end-results of ordinary meningo-vascular disease.
Can we discriminate between these two conditions by means of the Wassermann reaction? The writer thinks not, in the present state of our knowledge. Reference is made to certain differences in the pathological findings of typical general paralysis and the mixed types. There is some evidence that tertiary syphilis does not occur in association with general paralysis; yet the so-called mixed forms of general paralysis are avowedly cases of combined tertiary syphilis and parasyphilis. Cases are here quoted which are believed to constitute a considerable class and which are able to affect appreciably the statistics of general paralysis if by chance they are confused with this disease. Cerebral syphilis assumes so many different forms and operates in so many different ways that no unusual clinical finding should be given a final interpretation until after a post-mortem examination. It is of importance that a definite distinction be maintained between typical general paralysis and the mixed forms. Such distinction has a practical bearing on the study of causes, the interpretation of therapeutic results and the development of fresh methods of prevention and cure.

C. S. R.

[142] The haematopoietic functions in general paresis.—H. Wilfred Eddison.


In general paresis there is impairment of the function of the leucoblastic tissues in the bone-marrow, with diminution of the leucocyte reserve. This is not the case in non-paretic syphilis. General paresis is differentiated from other forms of cerebral syphilis by the nature of the parenchymatous changes in the central nervous system. The affection of the blood-forming tissues constitutes another differentiating factor. It is possible that this condition is one which depresses the cerebral tissues and weakens their resistance to the attack of the spirochaete. An analogy can be drawn between paresis and pernicious anaemia, in that (1) there is, in both, impairment of the blood-forming tissues; and (2) the distribution of the degenerated areas in the medulla and spinal cord is suggestively similar in both. The depression of leucopoietic activity may account for the ease with which bed-sores are developed in paretic subjects, and the readiness with which the patients die of intercurrent infection. When some infection is induced in a paretic which will excite polymorphocytosis, the circulation immediately receives a high proportion of immature leucocytes. The degree of leucocytic reaction induced by infection with Spirochaeta Obermeieri or other leucogenic agents varies inversely with the stage to which the general paresis has advanced. The better the general condition of the patient after such pyrexial treatment the nearer does the differential count approach the normal, and the converse is equally true. The progress of general paresis can sometimes be stayed by measures which result in increased leucogenesis. On the other hand, these measures tend to hasten the progress of the disease in cases which produce
an unfavourable leucocytic response. With regard to induced malaria, which, so far as the polymorphocytes are concerned, produces leucopenia, it is significant that a condition which gives the leucopoietic tissues a rest should be associated with a clinical improvement. It is suggested that when pyrexial therapy of a leucogenic type is contemplated, a preliminary test should be carried out in order to eliminate those cases which give a poor leucocytic response, since these are apt to deteriorate under such treatment.

C. S. R.

[143] Medical examination prior to marriage and mental disorders (Examen médical prénuptial et troubles mentaux).—L. REDALIE. L'Hygiène mentale, 1929, xxiv, 15.

After discussing the various points connected with such an examination, the writer concludes that in the present state of knowledge any medical certificate would not solve such a complicated problem as that of pathological character or psychopathic heredity in their relations to marriage. The obligation of having such a certificate risks an increase in the number of free unions and thus of not preventing the procreation of degenerated stock. The best means to combat undesirable marriages from the point of view of medicine consists in the propagation of mental hygienic ideas.

C. S. R.

PROGNOSIS AND TREATMENT.

[144] The psychology of readjustment, with special reference to mental hygiene work in college.—KARL F. Muenzinger and FLORENCE WEAVER Muenzinger. Mental Hygiene, 1929, xiii, 250.

In the process of readjustment, according to these writers, the factors to be considered are: clarification and change of purpose, counterbalancing thoughts, substitution of overt responses ('habits'), attaching emotional reactions to new persons and situations, appeals, counteraction by fear of consequences, the attitude of detachment, definiteness of attack and planning ahead, self-help, and change of environment. The last named is often difficult, if not impossible, to effect. If a change of environment is not planned, the student realizes from the beginning that there is no possibility of 'running away' from his difficulties. He must face these frankly and solve his conflicts rationally. This means an insurance against future maladjustments. This change of the psychological situation at times means the substitution of conscious desires and purposes for unconscious ones. In guiding a change of the psychological situation of the maladjusted, the adviser cannot hide entirely his own personal bias and prejudice. He must always be aware of the necessity of preserving the integrity of the maladjusted person and not inject his own desires. It may even be necessary that the adviser warn the student not to