PART III.—PSYCHOLOGICAL RETROSPECT.

AMERICAN.

By C. Hubert Bond, M.D., B.Sc.

In the *Journal of Nervous and Mental Disease*, June, July, and August, 1896, an interesting case of "Chorea fatal in a girl thirteen and a half years old" is reported by Dr. F. R. Fry. When first seen by him, five days before the fatal termination, choreic movements had existed for six weeks. They were of the usual type, but very severe, and involved the face, neck, trunk, and extremities, all about equally. Articulation was very difficult. Mental symptoms were never prominent; this is noteworthy, as frequently in fatal cases of *chorea gravis* the immediate cause of death is the intensity of the nervous symptoms. Though once or twice there were transient illusions, on the whole the sensorium was clear. During the last few days the temperature gradually rose, eventually reaching 105·2° F. She had then become delirious, and the movements were somewhat subsiding. Death occurred a few hours later. Throughout the case there was no evidence of complications of any kind. It is to be regretted that no post-mortem examination was permitted. A sister of the father is stated to have succumbed to a similar attack of chorea.

In a paper read by Dr. Noyes, "Sporadic Cretinism" is discussed. The effect of heredity, he stated, might be manifested in three ways, viz.:—(1) In a congenital local defect; (2) in a defect of growth; and (3) in a defect in the general vitality. Recent epidemics had shown that heredity was the chief cause of sporadic cretinism. Only those whose parents had goître seemed to develop cretinism; that is to say, that those with goîtres were not cretins, but cretinism appeared in the next generation. The etiology of the sporadic is even more obscure than that of the epidemic form. Several of the reported cases have been the first children of quite young parents; one or both of the parents were apt to be neurotic; there was often a marked alcoholic taint; other children in the family betrayed neurotic stigmata. The symptoms of cretinism were to be explained as a result of a myxœdematous process in the undeveloped tissues of the infant.

Dr. F. Peterson showed a child which, now at the age of twenty-seven months, must be considered in every respect an apparently normal one. When aged eighteen months he was a well-marked example of sporadic cretinism, with a small and hard thyroid gland, though the cretinous condition had not yet advanced far. Six weeks' treatment by one grain of thyroid extract daily was sufficient to produce a marked change for the better in the child's appearance; and seven and a half months later he did not differ

from an average child of the same age. The treatment might require to be continued indefinitely.

The "Nature and Treatment of Exophthalmic Goître" was the subject of a discussion opened by Dr. M. A. Starr. He contrasted the features of this disease with myxœdema, and, among other points, he stated that, while the subjects of the latter are particularly dull and apathetic, patients with Graves' disease are characteristically alert and active and intensely emotional—their mental state, in exceptional cases, even being one of acute mania. He urged the theory that the disease is due to hyper-activity of the thyroid gland, and said that a reduction of its secretion to a normal amount would result in a cure—hence, possibly, the explanation of the beneficial use of belladonna. The mental condition of the patient exerted a marked influence on the activity of the thyroid gland—hence the value of the "rest-cure." In his experience glycero-phosphate of sodium, in doses of twenty grains three times a day, proved useful in a number of cases. The consensus of opinion now seemed to be that thyroid and thymus extracts are of more harm than value in the treatment of exophthalmic goître. In cases fatal after extirpation of the thyroid gland, death has been due not to sepsis, but to sudden poisoning of the system by an absorption of thyroid juice during the operation; and patients themselves have observed that manipulation of the gland is liable to increase the symptoms of the diease.

Dr. Clara Barrus contributes a paper on "Insanity in Young Women," based on an analysis of 121 insane girls and young women, whose ages ranged from 11 to 35. In 112 instances the initial attack, or the beginning of the present one, occurred before the age of 26. She points out that owing to the peculiar contradictoriness and uncertainty characterising adolescent insanity—rapid alternations of mania and melancholia being seen in the same individual without the distinctly marked cycle of *folie circulaire*—classification of such cases is not easy. Maniacal cases were rather more than double the number of melancholic ones. Insanity among the relatives was acknowledged in 50 per cent. of the cases, insane mothers being slightly more numerous than insane fathers. Among accompanying bodily diseases noted on admission, of the 45 patients examined, gynæcological abnormalities were present in 35 instances. They were mostly of the nature of cervical erosions and flexions, and did not give rise to conspicuous symptoms. The relation of menstruation to insanity, or *vice versâ*, was hard to determine. In several of the cases puberty had been postponed till the eighteenth or twentieth years. In many, slight bodily deformities, asymmetries and other neurotic stigmata were to be observed. The writer pertinently suggests that these, besides indicating a neuropathic diathesis, must form constant sources of annoyance to those thus afflicted, making them envious, and sooner or later suspicious, of their more favoured

playmates, and so help to precipitate an attack of insanity. The recoveries among these cases of adolescent insanity were made, in most instances, in from six to twelve months. In conclusion the writer believes that a deeper inquiry into the tendencies and environments of such cases would help us to ward off from other neurotic young women attacks of adolescent insanity.

In a most interesting article on "Scleroderma," Professor Dercum argues with much force that its right place in nosology is among diseases of the nervous system, and that it is a trophic affection as much as myxœdema and acromegaly. He describes with considerable detail three marked examples of it. The first occurred in a man, aged 43, who had met with a severe injury to his head shortly before, followed by persistent occipital headache. Symptoms of scleroderma were noted about four months after the injury. He was also markedly asthenic, and exhibited extreme mental depression. He himself noticed that he had become very irritable, easily excited, and unable to do his work as well as formerly. He complained of tinnitus. An exaggeration of the knee-reflex was present. The blood was found to contain peptone, and stress is laid on this as indicative of serious disturbance of the normal metabolism. The second example was that of a woman, aged 31, in whom signs of scleroderma developed very soon after a severe fright. No distinct mental symptoms were present in this case, however, but general weakness was pronounced, and at one time she was exceedingly neurasthenic. Pains of various kinds were a marked feature, referred both to the joints and to the nerves, suggesting neuritis. Various trophic changes were visible. The skin of the pulp of the fingers and nails became discoloured, and also very sensitive, and on the latter ridges developed. A deep ulcer showed itself at the base of the occiput, preceded by severe neuralgic pain there, and there were ulcers to be seen over the phalangeal joints. Changes in the structure of the joint cartilages (proved by Roentgengraphs) produced marked sclerodactyle. The blood of this patient did not contain peptone, but the leucocytes were diminished in number, and of them the proportion of mononuclear ones was much too high, as also was the case in the male patient. The third example was a woman, aged 38. In her case there was no special nervous shock immediately antedating the development of scleroderma, but she had worked in an ice-house for a number of years, and the parts of the skin specially involved were just those which were exposed to the cold of the refrigerator. In addition to the ordinary features of the disease marked atrophic changes occurred in the fingers, evidently accompanied by disappearance of bone, and resulting in a great degree of sclerodactyle. Neuralgic pains were absent, but irregularly recurring melancholia was pronounced. The knee-reflex was minus. She had become much more sensitive to cold, and the hands at times were distinctly cyanotic. During the course of

the disease she became pregnant, and was delivered of a healthy child, and during the pregnancy the thyroid gland was greatly enlarged. The urine in this and the previous case was greatly deficient in urea, while in the first patient the output of total solids was unusually high. Dercum then summarises the general symptomatology of scleroderma, and discusses the theories at present in vogue regarding it. On the side of the nervous system we find hypochondriasis, hysteria, and melancholia; also insomnia, giddiness, and neuralgia. Many disturbances of sensation have been noted. Chorea, tremors, spasms, ataxia, inequality of pupils, and even symptoms of Graves' disease, may appear. The great variety of nervous phenomena, and the fact that no one of them is always present, indicate that many are unessential in character, but the fact that nervous symptoms of one kind or another are usually present indicates that the nervous system is more or less involved. The single fact that the infiltration of the tissues is not necessarily progressive, but sometimes recurs, shows that some process other than a primary sclerosis is at work.

"The Functions of the Neuron" is the title of Professor Dercum's Presidential Address to the American Neurological Association. In it he deprecates a growing tendency on the part of some observers to misconstrue the structure of the nervous system, and to misinterpret the truths which that structure teaches. He states that there has been a tendency of late to under-estimate the importance of the nerve-cells, one theory being that they are mere watering and feeding places, and not places for renewing nerve-activity, and that impulses are capable of conveyance from processes to processes without passing through the nerve-cells themselves. He regards this view as untenable, and wholly opposed to the fundamental principles of biology, and believes that nothing but hopeless confusion of function could result from it. Such facts as we do possess, he opines, are directly opposed to such a diffusion of nervous energy. The comparatively recent discoveries of Golgi, Ramon y Cajal, and Van Gehuchten are cited as completely demonstrating that the cell is the actual integral structure in nerve as in all other tissues. From them we learn that its processes, instead of fusing with those of others, are sharply defined and have no relation to those of other cells, except that of propinquity, at the most contact. Having, then, clearly grasped the individuality of the nerve-cell, Dercum asks whether or no the neuron is absolutely stationary. Has it, he asks, no matter how slight, any power of movement? Such a possibility, it appears, had occurred to others six years previously, but had received only small attention, and later observations in the same direction were not endorsed by Kölliker or Ramon y Cajal. The latter's reasons for denying the nerve-cells movement, Dercum maintains, are contradictory, and defeat the object in view. In addition he quotes Wiedersheim as having actually seen in the

living animal, *leptodora hyalina*, the nerve-cells in the œsophageal ganglion move. Such a gross amœboid movement, however, is of course not contended for in the nerve-cells of vertebrates. Such a theory greatly simplifies the complex problems that arise in attempting to explain, for instance, the variability and intermittent character of the symptoms of hysterical paralysis and anæsthesia. It affords, too, a ready explanation of the mysteries of hypnotism. Sleep would be explained, not by brain anæmia, but by saying that the substance of the cortical cells has been diminished by functional activity, and their processes retracted, causing the neurons to no longer be in active relation to each other. Interchange of action cannot take place, and unconsciousness follows. Surely we have here, says Dercum, a basis upon which a rational and biological psychology can be based.

Under the term "Amaurotic Family Idiocy," Dr. B. Sachs, in his Inaugural Address as President of the New York Neurological Society, described a family form of idiocy, generally fatal, and associated with early blindness. He had collected nineteen examples, eight of which had come under his personal observation; five were boys, eleven girls, while in three the sex was not stated. They were all free from any syphilitic or rachitic taint. The salient features of these subjects were, to quote his own words, "(1) cessation of mental development, and idiocy at the age of a few months; (2) paresis of the greater part of the body, either flaccid or spastic; (3) the reflexes may be deficient or increased; (4) diminution of vision terminating in absolute blindness, with changes in the macula and later an optic nerve atrophy; (5) marasmus and a fatal termination at about two years of age; and (6) the occurrence of the affection in several members of the same family. Nystagmus, strabismus, and hyperacuity of hearing had been observed in most of the cases." As regards the etiology, a marked neurotic taint, consanguinity of the parents, and traumatism in the mother during pregnancy, were the most prominent factors. Dr. Sachs suggested the term "Agenesis corticalis" as descriptive of the disease.

"Hemiatrophy of the Tongue, with the Report of a Case," was the subject of a paper by Dr. C. W. Burr. The most frequent instances of it due to direct injury of the hypoglossal nerve and the extremely rare cases due to peripheral neuritis are purposely omitted; only those caused by disease in or near the medulla are included. He states that the association of the condition with locomotor ataxia is relatively frequent though absolutely rare; that it is a rare complication of the spinal type of general paralysis of the insane; it may occur in syringomyelia. The onset is sometimes sudden. In a few cases the wasting has not been limited to the tongue, but has involved certain of the muscles of the neck, and has even invaded the arm. As regards the period of life of the patients referred to in the paper, 76 was the maximum age;

two cases dating from childhood have been recorded, aged respectively five and nine; both had had scarlet fever followed by convulsions, one six weeks and the other twelve months previously. The lesions found post-mortem, he states, vary greatly. Among them are mentioned chronic nuclear degeneration, a tumour of the medulla limited to one side, or one growing from the membranes or bone, meningitis, etc. While it is more commonly associated with locomotor ataxia than any other disease of the spinal cord, there is no reason why it should not occur in insular sclerosis. The writer concludes that hemiatrophy of the tongue with paresis can only be caused by a lesion of the hypoglossal nerve or its nucleus in the medulla. When hemiatrophy occurs without symptoms referable to other nerves the lesion may be taken to be in the nerve trunk, owing to the position of the nucleus to those of other nerves; but, should symptoms referable to other nerves be found, since the hypoglossal, pneumogastric, and spinal accessory nerves are in close contact, it does not follow that the lesion is within the medulla. Syphilis is the most frequent predisposing cause, but the writer is of opinion that in the future it is probable that acute infectious fevers must be admitted as occasional factors in the causation of the condition.

"Alcoholism in a Child of Three Years."—Dr. C. A. Herter presented a child, three years old, in whom he had at first suspected convexity meningitis or possibly an irregular form of tubercular meningitis; but, from the history and features of the case, he concluded that alcohol had been absorbed in sufficient quantities to produce an acute or sub-acute meningo-encephalitis. The child had been given more or less whisky daily, but seventeen days before coming under observation he had taken at one time at least twelve ounces of neat whisky, with the result that he remained in stupor for fourteen hours. He remained partially drowsy for a week. Spasticity and contractures developed, chiefly on the left side, and the knee-reflexes disappeared; but there was never any rigidity of the neck or strabismus. The pupils ultimately did not respond to light. The liver extended below the lower border of the ribs. When in hospital numerous convulsions occurred during a fortnight. After five weeks he began to mentally improve, but for two and a half months he lost weight and physically deteriorated, after which there was steady improvement, ending in entire recovery at the end of four and a half months.

"Cerebral Complications of Raynaud's Disease."—Under this heading Dr. W. Osler referred to the frequency with which Raynaud's disease was to be met with in forms of insanity. In a few cases cerebral symptoms, due seemingly to the same vascular changes which develop in peripheral regions, were to be observed. Thus he had seen a man whose epileptic attacks occurred only in winter, and were then associated with local asphyxia and superficial necrosis of the ears and also with hæmoglobinuria. A

woman of 52 had for six years at intervals local syncope in the right hand along with, on several occasions, transient paralysis of the right arm and leg, and sometimes was even associated with aphasia. The latter is believed to be a very rare complication of the disease.

Dr. W. Channing reports "A Case of Tumour of the Thalamus, with Remarks on the Mental Symptoms." The growth was found post-mortem to be a cystic-looking mass involving the right thalamus in its entire extent, and, microscopically, consisted of very numerous and rather small cells, arranged irregularly. It contained many large newly formed blood-vessels, and is to be classed as a vascular glioma. The patient, aged 41, was a school-teacher, and had actively pursued her occupation to within five weeks of death, and up to seven days of her admission to the hospital for mental diseases. Just prior to this she had completed seven or eight weeks of extremely hard class-work, and, to use her own words, she felt that if she did not have some rest she would "burst." While taking this rest she was observed at times to be unusually excited and exhilarated; at other times she would be depressed and exhausted. But there was never any dulness, lethargy, stupor, or pronounced dementia, such as is common in cases of brain tumours. She was eventually admitted to the hospital in a state of sub-acute mania, talking disconnectedly, unduly pleased with everything, and showing considerable exaltation. Hallucinations of taste and smell were present, causing her to complain of the bad smell and taste of her food. Scanty menstruation appeared the day after admission. The patella-reflexes were rather exaggerated, but equal. There was no thought at this time of any cerebral neoplasm, though it was afterwards remembered that on the day of admission there was some apparent paresis of the left arm and leg. Gradually physical symptoms of the brain lesion developed, and coincidently the brain alienation grew less and less, though an underlying happy exalted mental condition remained as long as she had any power to express herself. Though with difficulty, she could be roused and made to understand what was said to her up to within twenty-four hours of her death.

In the *Medico-Legal Journal*, December, 1895, Dr. W. Xavier Sudduth writes upon "Hypnotism and Crime." His aim is to show that, if rightly considered, a defence of hypnotic influence ought never to be successful in protecting a criminal. He alludes to several cases, which have been quoted as examples, where it was proved that hypnotism might have been used for the commission of the crime. He points out, however, how grossly these cases have been misrepresented. Hypnotism, he says, is a modified form of natural sleep, but in its more complex form it compares to somnambulism. A person in the hypnotic state is fully conscious of his state; he is possessed of a double or dual consciousness, and will do the will of another only so long as the suggestions do not shock his sense of propriety

and are physically possible of performance. Criminal or immoral suggestions made to a moral subject meet, he says, the auto-suggestion arising from his own conscience; confusion is created in his mind, and he simply remains passive. The same is true of post-hypnotic suggestions; these, given during the hypnotic state in order to be carried out at some future time, will only be successful provided they are not repugnant to the subject in the waking state. We are to remember that there are people who are negatively honest; they are good because they have never been tempted to be bad. Such persons tempted either in the hypnotic or waking state might fall simply because of their lack of force of character. The question of successful hypnotic criminal suggestion turns therefore on a point of morals. He concludes by saying: "Given a criminal or immoral subject and a hypnotist of like character, and criminal or immoral results may be obtained. But shall a natural force of great potency be condemned simply because it may be occasionally misused?"

The same journal contains an article by Dr. G. E. Shuttleworth on "Criminal Responsibility in Idiots and Feeble-Minded Persons." In it he draws attention to the more recent and growing recognition of the incompetencies, not only of idiots, but of persons who are mentally feeble in a considerably less degree, such, for instance, as that product of our modern civilisation whom he aptly terms the "educated imbecile." Older writers, in defining who were and who were not to be considered as incapable of criminal responsibility, would probably draw the line of total incompetency at idiots. It is in the higher grades of mental deficiency that we meet with difficulty. He cites a case of arrested brain development where the intellectual power might to a certain extent reach the average, but where the moral faculties and power of control remain that of a child. To punish such a one convicted of a crime in the opinion of some from a medical point of view would be unwarrantable. Dr. Shuttleworth deprecates such a view of the case, and states that the doctrine of absolute irresponsibility is dangerous. In his experience the application of discipline to imbecile youths is distinctly beneficial. He is opposed to the growing tendency to apply too widely the term "degenerate" to extenuate excesses, which might be kept in check by a proper cultivation of the inhibitory powers. How to "make the punishment fit the crime" in such cases is a problem, for the solution of which he suggests the co-operation of the special knowledge both of doctors and lawyers.

In the *State Hospitals Bulletin*, July, 1896, is an able and most interesting paper by Dr. Warren L. Babcock on "The Relief of Intracranial Pressure in General Paralysis of the Insane, Tabes Dorsalis, and other Diseases by Lumbar Puncture." Reference is made to the previous surgical efforts by trephining and laminectomy for the relief of brain pressure and removal of excess of fluid. A *résumé*

of such operative work, he says, demonstrates in most cases some temporary improvement in the mental symptoms. This apparently depends on (1) Relief of pressure by removal of fluid; (2) Greater opportunity for brain expansion and pulsation by removal of bone; (3) Subsidence of meningeal inflammation by local depletion of blood-vessels; and (4) Shock to nervous system as a direct result of operation. Paracentesis of the spinal dura or lumbar puncture is a recent procedure, and was first advocated in 1891 in hydrocephalus, and has since been used both as a therapeutic and diagnostic measure in a variety of brain disorders. It was first performed in cases of general paralysis in England by John Turner. Following the publication of the latter's results, Dr. Babcock performed the operation twenty-two times on paretics in all stages, and other cases of brain or spinal trouble. His paper includes a description and illustration of the method of procedure. Headache of an intense, almost excruciating, character, accompanied or followed aspiration in quite 90 per cent. of the cases. The temperature remained unchanged throughout the operation, and revealed no variation from normal six hours later. The pupils showed no change except in one case, in which a previous inequality disappeared. Three of the cases in which the knee-jerk had become abolished showed return of the reflex after puncture; it, however, disappeared again after three weeks in two of the patients, while in the third it became exaggerated. A distinct improvement in facial expression was observed in three cases. But of all symptoms of paresis the most pronounced improvement was in the ataxia; this change was well marked in five out of twelve paretics and in a case of stuporous melancholia, who also had an impaired gait; and, to a less extent, improvement was distinct in the gait of three other paretics. Dr. Babcock suggests that this alleviation of ataxia is brought about by (1) simple mechanical relief of pressure to which the co-ordinating centres are subjected; (2) improvement in the circulation of the motor centres of the cord, medulla, and cortex; and (3) the withdrawal of fluid and the consequent improvement in the circulation of the cortical arterioles, re-establishing temporarily the inhibitory functions of the higher centres. Speech and muscular tremors showed some slight improvement. Grandiose and other delusions were in most of the cases absent 48 hours after puncture, and in some the old delusions remain absent or modified. The majority of the patients were made on the whole brighter and more observant—the stupor and dementia due to brain-pressure were removed. In other words the operation may, in selected cases, as it were, take a paretic out of the third stage and, temporarily at least, place him back in the second. The series of cases in which the procedure was tried embraced twelve of general paralysis; one each of locomotor ataxia, stuporous melancholia, organic dementia, and status epilepticus; two of simple melancholia with pressure

symptoms; and one case of acute delirium. In this last case the fluid withdrawn was subjected to a bacteriological examination; on all the slides the micrococcus pneumoniæ and the streptococcus pyogenes were visible. Injections of the fresh fluid and of that taken five minutes after death of the patient were made into rabbits, but with somewhat, as yet, uncertain results. The amount withdrawn in the several cases ranged from 154 c.c. to less than 1 c.c. in a case of paresis punctured for the second time where the pressure seemed to be *nil*. In the latter case a second puncture was determined upon after the patient had relapsed from the good effects of the first puncture. Fifty c.c. of fluid were obtained on the first occasion, but only a few drops the second time. The needle was withdrawn to make sure it was pervious and again inserted, but with a like result. The explanation of this relapse is not clear. The patient from whom the maximum amount of fluid was obtained showed the greatest improvement. The rate of flow was in some instances increased nearly tenfold, that in health having been estimated to be about ten drops a minute. Re-accumulation was found to be much quicker in general paralytics in the second stage than in any other class of cases. Albumin, instead of being absent or present only in traces, was found in ponderable amounts in all cases of paresis, and was detected in the other cases, only as a mere trace however, except in the case of acute delirium, where it reached over three per cent. The chlorides were also greatly in excess in the spinal fluid of the paretics, and to a less extent in the other patients. The specific gravity was generally lower than normal, while the reaction was neutral in over 90 per cent. of the paretics, and in three-fourths of the remaining cases. Babcock's conclusions are—(1) Lumbar puncture affords temporary relief from pressure symptoms in over 50 per cent. of cases of paresis submitted to the operation. (2) The most beneficial effects are manifest over motor inco-ordination, *i.e.*, ataxia, tremors, etc. (3) Analysis of the fluid obtained in paresis shows that it contains an inflammatory product (albumin) throughout all stages. (4) It may be of benefit in locomotor ataxia, status epilepticus, or organic cerebral disease, and deserves further trial in these cases. (5) It presents excellent diagnostic possibilities, particularly in meningeal inflammations. (6) It does not sufficiently benefit melancholia with pressure symptoms to warrant its use in this disease. (7) Re-accumulation usually occurs within from three to ten weeks, when a second or even a third puncture is indicated if patient's condition admits.

Dr. F. Peterson contributes a good summary of the "Stigmata of Degeneration." He defines the term degeneracy, and refers to some points of distinction between eccentricities of genius and those of degeneracy. The various stigmata he divides primarily into three groups, viz., Anatomical, Physiological, and Psychical stigmata. Under the last are included insanity, idiocy, imbecility,

feeble-mindedness, eccentricity, moral delinquency, and sexual perversion. The anatomical group includes asymmetry and various deformities of the cranium, inequality and irregularities of the face, dental anomalies, deformities of the palate, anomalies of the tongue, lips, nose, eye, ear, limbs, genital organs, skin, and of the body in general, such as giantism, dwarfishness, feminism, masculinism, etc. He dwells with considerable detail on those of the palate and ear, and several photographs are supplied in illustration of them. Seven types of pathological palates are described—the gothic-arched, horseshoe-arched, dome-shaped, flat-roofed, hip-roofed, the asymmetrical palate, and the torus palatinus. Each type, however, may present variations and combinations with other forms. The cleft-palate has not been placed in the classification, as Peterson is not sure that it may be considered as a well-marked stigma of degeneration, he only having found two or three examples among four hundred and fifty idiots and imbeciles examined. The anomalies of the ear, like those of the hard palate, claim high rank as indications of degeneracy. From the observations of others and his own studies Peterson makes out twenty-two varieties, the most important of which, he states, are: The deep position of the crus anterius; marked prominence of the anthelix; excessive broadening of the ear; stunted development or absence of the helix; trifurcation of the anthelix; widening of the fossa scaphoidea; absence of the crus superius; asymmetry of the two ears; excessive enlargement or diminution of the concha; excessive conchoidal structure of the ear; and complete absence of the lobule. This last departure from the normal is a special feature in the Cagot cretin. The physiological group of stigmata include: Under the motor function, delayed ability to walk, eat, etc., certain cases of tremors, tics, epilepsy, and nystagmus; under the sensory function, abnormalities of sight, congenital deafness, hereditary migraine, general anæsthesia and more rarely hyperæsthesia; anomalies of speech, possibly stammering and stuttering, but more important is delay in the acquisition of language or complete or partial defect of speech; anomalies of the genito-urinary function, especially retardation of puberty; anomalies of instinct or appetite. In closing, Dr. Peterson speaks of the possible etiology of these hereditary stigmata. It is to the central nervous system that we must chiefly look for an explanation. It takes strong stimuli to rearrange the nervous co-ordinations to reproduce the hereditary impulse; thus traits acquired by us in our individual lifetime are not transmitted to our descendants. It is some derangement of the nervous mechanism governing heredity which brings about deviations from the normal type. Poisons, such as alcohol, have such a power. But idiocy, insanity, epilepsy, and the like may of themselves disarrange the nervous co-ordinations sufficiently to give rise to anatomical and functional stigmata in the descendants. To the degenerate child is bequeathed a fragile

and unstable nervous constitution; this may show itself in the form of the various psychical departures, which are all more or less interchangeable. They may, however, remain latent, but in any case we are apt to find anatomical stigmata of degeneration.

International Medical Magazine, July, 1896.—"Arterio Sclerosis among the Insane," by E. D. Bondurant, M.D. Dr. Bondurant bases his observations on 200 consecutive autopsies, and finds that only 15 per cent. are free from the disease in some form. The cases are divided into three groups, one showing no arterial disease, one slight involvement of the larger arteries, and a third exhibiting well-marked changes. The first and second group are found to die of acute disease, and the third of chronic, especially renal. It is stated that atheromatous disease appears very common among negroes. He shows that where arteries lie comparatively free, irregularly distributed patches of atheroma are common, and on the other hand where they are intimately connected with the stroma of a glandular organ adventitial thickenings are found. The question of auto-poisoning from defective excretion is discussed at some length, and the relationship between arterio sclerosis and mental disease. He also points out that the ever present mental expression in atheromatous disease is dementia of some kind.

ITALIAN.

By W. Ford Robertson, M.D.

Functions of the Pituitary Body.

Vassale and Sacchi (*Rivista Sperimentale di Freniatria*, 1894, p. 83) record the results of some further experiments that they have made in the course of their investigations into the functions of the pituitary body. In their previous communication on the subject, published in 1892, they stated that they found that complete destruction of this organ in dogs and cats had fatal consequences within fourteen days. The symptoms produced included anorexia, depression, rigid gait, fibrillar contractions, muscular spasms, and lowering of temperature. They also found that partial destruction produced a series of similar symptoms, and they concluded that these were consequent upon a true functional insufficiency of the gland. As the result of their second series of experiments they have now supplemented these observations in certain important particulars. They have ascertained that the symptoms produced by destruction of the pituitary, including the depression of temperature, can be temporarily relieved by an injection of an extract of the organ from the ox. In a case in which the pituitary was only partially destroyed the characteristic phenomena were observed for about three weeks, after which the animal gradually recovered, and remained healthy for eleven months. It was then