

mended by many physicians, especially *Herpin*. The treatment should be continued for three months. Valerianate of zinc is, in fact, a combination of two remedies for epilepsy, but the effects of the zinc do not seem to be improved in the least by the valerian. Others prefer the sulphate of zinc, and give it in j to v grain doses pro die.

The following remedies are employed in older cases, and in which those just described have proved ineffectual:

(1.) Ammoniate of copper and the various preparations of copper with which, owing to their nauseating properties, it is not usually possible to go beyond $\frac{1}{3}$, at the most $\frac{1}{4}$ grain doses.

(2.) Argent. nitrat. is recommended by many physicians, especially by *Heim*. In children it must be given in $\frac{1}{6}$ to 1 grain daily for years. There seems to be no very great danger of the skin becoming gray from it, as that happens in only a very few patients. I, for instance, notwithstanding a most extensive employment of this remedy, have never yet observed that result. The great precaution that is taken to introduce the nitrate of silver, as such, into the stomach, is probably superfluous, for the combinations of chlorine which are constantly present in the gastric secretions must certainly convert it quickly into a chloride.

(3.) Mercury, internally in the form of calomel, sublimate, or cinabar, or externally in the form of blue ointment, is only indicated when there is a suspicion of the presence of Tophi syphilitici. It, however, must not be forgotten that, on account of its consecutive constitutional effects, it may prove very injurious.

(4.) The additional metallic remedies to be mentioned are, acetate of lead, oxide of zinc, nitrate of bismuth, the preparations of iron, manganese, and arsenic.

(5.) The narcotics have been extensively employed, and are invariably found in the numerous secret remedies. No certain curative effect has been derived from opium, but a rapidly-developed imbecility has very often indeed been observed from its use. Rad. belladonnæ, and latterly atropine in gr. $\frac{1}{60}$ to $\frac{1}{10}$, chloroform, ether, ext. stramonii, hyoscyamus, digitalis, agaricus muscarius, narcissus, pseudo-narcissus, nux vomica, and strychnine (gr. $\frac{1}{30}$ to $\frac{1}{2}$ pro die), have been repeatedly recommended.

(6.) Finally, there is yet a list of vegetable and other kind of remedies from the various classes of the materia medica: selium palustre, indigo, viscum quercinum, sedum acre, folia aurantiorum, radix pæoniæ, cotyledon umbilicus, scutellaria geniculata, assafoetida, moschus, castoreum, camphor, amber, cinchona and its preparations, rad. dictami albi, pepper-corn, turpentine, Dipel's oil, phosphorus, and the mineral acids.

(ad 4.) *The general bodily and mental hygiene* is of great importance. The diet should not be too nutritious, and alcoholics should be prohibited altogether, for in many patients a fit is induced by indigestion, and, still more surely by a use of alcoholic drinks. Constipation should never be permitted. It is of especial benefit, in all cases, to stimulate the functions of the skin by cold and warm baths, so as to produce copious perspiration. Bodily exercise, especially in the open air—for example, in garden and field—often effects a complete cure. Of the bodily exertions, only such, of course, are to be chosen as will not of themselves induce a paroxysm; riding and swimming, for example, can hardly be recommended. Travelling and change of climate, particularly changing a colder for a warmer, often bring about a suspension of the paroxysms, to which the diversion and the agreeable state of the mind which result from some travels may contribute not a little. It is a well-known fact that children are seldom attacked while playing, or when occupied, but only at night, or when they sit morose and idle.

They should not be encouraged to forego mental exertions, for the mind, if not exercised, sinks into a state of unhealthy torpor. But the hours of study should be so arranged as to allow sufficient intervals of rest; and they should be taught in such a manner as to interest them in their studies, and thus render learning comparatively easy—a fact, however, every tutor does not know, and a result he does not know how to accomplish. These children should not, if possible, be sent to the public schools, for most of them learn much slower than healthy children, and, on account of the fits, are feared and even derided by the latter. Under these circumstances the mental depression becomes considerably aggravated, and it is a serious detriment to a person, in after-life, that his previous affliction should be generally known, although he may have been subsequently cured of it.

APPENDIX.

DISEASES OF THE MIND.—In children, *imbecility* and *idiotism* predominantly occur. It is necessary to discriminate between real idiotism and arrested or retarded development of the mind, although there certainly are steps of transition where this distinction is difficult to make. The development of the body, also, in real idiots, is always visibly retarded, while many children, with extremely feeble mental endowments, the so-called *enfants arrières*, corporeally thrive all the more. Marked abnormalities are also always detected in the skull of idiots, which are due to the smallness of the brain.

The circumference of the skull is small, the head is compressed or pointed from before backward, or from side to side, in contrast to

endemic cretinism, which is found most typically marked in some of the valleys of the Tyrol, and which manifests itself by the form of the skull approaching more that of a square, and by hypertrophy of the bones.

Idiotism, depending upon smallness of the brain, occurs sporadically, and seems to be promoted by intermarriage.

Out of one hundred idiots, according to statistical compilations by *Bemis*, of Kentucky, fifteen were the progeny of marriages that had been formed between cousins. Cretinism occurs chiefly in narrow, dark valleys, and is very seldom observed on the plains. Whether coitus during intoxication will also produce idiotic children, is much doubted, for, if this were the case, these would undoubtedly be more numerous.

Symptoms.—The degree of idiotism varies exceedingly. In the extreme degree, all mental action is defective, and the organs of sense perform their functions very imperfectly. Deafness is frequent. Complete idiots are incapable of learning to speak; they do not even attempt, by stammerings or mutterings, to make themselves understood; the cry is rough and monotonous. The children learn to sit very late, but never to walk. They swallow greedily the food allowed them, without tasting it; they allow the urine and stools to pass off uncontrolled. In consequence of this torpor, the muscles of the body become atrophied, and the integument covered with ulcers, from pressure and filth. Fortunately, most of these individuals die of convulsions during the first dentition, and never attain to puberty.

In those cases of less severity the children learn to stammer and to walk, and instinctive movements also take place. They call for food and drink, recognize the objects by which they are surrounded, and become fond of cleanliness. They also, in some cases, learn to perform simple physical acts, in the same manner as educated animals.

But their gait always remains unsteady, the expression of the countenance silly, and the muscular system weak, while convulsions, and subsequently paralysis, often ensue. These children very seldom live past the first and second dentition, and at best attain to no great age.

In the mildest degree—that of simple mental debility—the smallness of the head is not very striking, the body develops itself, although slowly, to its almost normal formation, and one or another sense only remains blunted, but asthenopia, or deaf-mutism, also makes these individuals useless members of the human family.

Treatment.—Defective formation of the brain, of course, can never be the subject of direct treatment, but, by a proper rearing and education, something may possibly be accomplished in waking up the feeble mental powers. In order to keep such children alive as long

as possible, the first requirement is to habituate them to cleanliness, without which, ulceration of the skin, quickly followed by atrophy, results.

It is best to remove these children from the paternal home, for the long period of time and the rigid surveillance requisite for their improvement are seldom to be found in their own.

Then it is a question whether it is possible, by incessant, careful observation, finally to discover the existence of one or more faculties, and to persevere in their progressive cultivation and improvement. The main difficulties encountered in this are the indolence and the complete abstraction of the idiots.

The education of these poor creatures requires an almost superhuman patience—such, indeed, as is very seldom found, their uncleanly habits adding much to these difficulties.

Other diseases of the mind, in young children, are very rare, but, after the completion of the second dentition, they are oftener observed. Out of one thousand cases of insanity, according to statistical compilations of cases that have occurred in Bicêtre during three years, on an average, ten were youthful idiots, epileptics and imbeciles not included.

From a most careful inspection of these cases, it was found that, aside from the hereditary disposition and previous disease, improper education and want of care were the chief causes of their condition.

Le Paulmier, the compiler of these statistics, distinguishes three forms of mania in the young: (1), maniacal exaltation; (2), insanity; and (3), madness.

In the first form, the faculty of judgment is not completely abolished; still, a marked deficiency of reflective faculty exists. The patients are talkative, excited, vain; are a prey to foolish dissipations, as well as shameless and violent acts.

In the second degree, insanity, the confusion of ideas is more pronounced; the patient incessantly jumps from one subject to another, or from one extreme of feeling to another. In the third and highest form, all association of ideas is abolished, and panphobia and mania, the signs of commencing paralysis and imbecility, not unfrequently become superadded.

Independent of the real symptoms of mania, psychosis in the youth is often complicated with chorea, or a kind of catalepsy, which comes on at uncertain intervals, and in paroxysms of greater or less duration. *West* speaks of children affected with mental diseases, who were only six or seven years old; generally, however, the majority of these have attained the tenth year, and are approaching puberty.

The prognosis, in general, is more favorable than in adult dementia,

but, according to *Delasiauve*, there is always a great tendency to relapses.

It has been observed that, the longer the stadium of premonition lasts, the worse is the prognosis. We are justified in the conclusion that, although the cure often appears permanent, a psychological disturbance occurring in childhood is always to be regarded as a very serious disease.

The *treatment* in the paternal house is but very seldom effectual, and hence it is absolutely necessary to have these patients removed to an asylum.

D.—HIGHER ORGANS OF SENSE.

I.—Sight.

Ophthalmology has grown into such a perfect specialty that a general treatise on the diseases of children need not comprise a detailed delineation of the diseases of the eye.

The student may therefore be referred to the works on ophthalmology for information upon this subject, and only the congenital diseases of the eye, and those that occur in infants especially, will here receive a very cursory description.

(1.) EPICANTHUS.—By epicanthus is understood an unsightly gathering of integument in the region of the root of the nose, toward the inner angle of the eye, a semilunar fold covering the angle of the eye in the form of a pocket. The upper point of this crescent is found at the root of the nose; the lower is lost in the integument of the cheek.

The root of the nose is always very flat, and the nasal bones meet each other at an obtuse angle, so that the folds of the integument, elevated by the accumulation of adipose substance, are on a level with the depressed nose.

The pocket never extends so far as to obscure the field of vision, but completely covers the inner angle of the eye, and may reach to the inner margin of the cornea.

The cause of this deformity, according to *V. Ammon*, is a flat dorsum of the nose, and a lax adhesion of the integument to the nasal and lachrymal bones. This etiology, however, is not very satisfactory, for there are also children with depressed noses, and easily displaceable integument, who exhibit no such fold whatever.

Epicanthus is always congenital and bilateral, but it may be larger on one side than upon the other. When the skin on the dorsum of the nose is raised up with two fingers into a fold, the deformity disappears, and this fact suggests the proper operative procedure. As the epicanthus is usually seen in the new-born child, and never in the

adult, it follows that, with increasing growth, it must become smaller and ultimately disappear.

This deformity, where it does not thus disappear early, may be remedied by excising a longitudinal fold of skin from the dorsum of the nose, and uniting the edges of the wound by suture.

(2.) CYCLOPIA—MONOPHTHALMIA.—Total defect of the orbits occurs in monstrosities, the frontal bone continues down into the upper jaw, and in the bone shallow grooves only exist in place of the orbit. In defective formation of the brain (hemicephalia), the bones of the orbit are only rudimentarily formed, and its upper border, in particular, is very much diminished, and very close to the optic foramen.

Cyclopia finally is likewise only possible in defective orbital bones. Here the ethmoid, the lachrymal, and the nasal bones are absent, and the sphenoid bone is also altered in shape. These are mere malformations, met with only in monstrosities incapable of living, and are, clinically, of no interest.

(3.) MALFORMATIONS OF THE EYEBALL.—(a.) *Coloboma iridis s. iridoschisma*, a congenital splitting of the iris, is a condition similar to that of harelip; the fissure in most cases runs downward, and the deformity is more frequently seen in both eyes than in one only. Its edges converge toward the ciliary border, and are but seldom parallel or diverging, so that the pupil mostly assumes the form of a pear, with the base directed downward. In rare instances a fissure in the large circle of the iris alone is observed, so that a normally round pupil, with a peripheral, triangular opening, separated from the pupil by an iris-colored transverse band, is present. By the alternate presence and absence of light in front of a coloboma, its margins may be seen to shorten and elongate like the contractions and dilatations of the pupil, but this closure never is great even under the influence of a strong light.

This condition has often been observed as an hereditary one. The complications occurring with it are: microphthalmus, ovale corneæ, central lenticular cataract, harelip, hypospadias, cerebral defects, and coloboma of the *upper eyelids*.

The latter is only observed on the upper eyelid, and consists in a narrow fissure of the tarsal cartilage, in which the external integument is not correspondingly fissured.

There is no embryological explanation for this malformation, such, for instance, as is readily found for harelip, for the upper eyelid at no time of embryonic life consists of two parts.

(b.) *Irideremia*.—Total or partial congenital absence of the iris is always observed simultaneously on both sides, a single instance