A treatise on the inflammatory and organic diseases of the brain : including irritation, congestion and inflammation of the brain, and its membranes, tuberculous-meningitis, hydrocephaloid disease, hydrocephalus, atrophy and hypertrophy, hydatids, and cancer of the brain. Based upon Th. J. Rueckert's Clinical experience in homoeopathy.

A

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BASED UPON

TH. J. RUECKERT'S "CLINICAL EXPERIENCE IN HOMŒOPATHY."

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ON THE

NATURE AND CAUSES

OF

IRRITATION, CONGESTION, INFLAMMATION, AND DROPSY OF THE BRAIN, AND ITS MEMBRANES.

I.—IRRITATION OF THE BRAIN.

IN CHILDREN.

Dr. W. Nickoll has thus designated a state of brain occurring in children, which appears to hold an intermediate place between hydrocephaloid disease and that of inflammation. It may on the one hand run into inflammation if neglected; and on the other hand is apt, if treated too actively and allopathically, to be followed by symptoms of exhaustion, and of the Hydrocephaloid disease of Gooch and Hall.

In simple irritation of the brain the child is wakeful, scarcely ever sleeping, irritable, highly sensitive to every object of sight and sound; the pupil is in many instances more or less contracted, the limbs are in action, the head tossed about; the child cries without any apparent cause; there is unusual liveliness and animation; it wakes suddenly from sleep, and starts at the least noise when awake; the fists are generally clenched, with the thumbs turned in, and the forearms bent upwards on the arms; and sometimes a degree of opisthotonos is observed, the legs being drawn up, while the head is thrown back. This state of things is usually, though not always, accompanied by increased temperature of the head and of the skin generally, and by an accelerated pulse.

Some children seem to be much more prone than others to this affection, and it is in the nervous, weakly and scrofulous that it is most frequently seen. There is apparently an original difference or excitability of the nervous constitution, which predisposes them to be thrown into this state of Erethism; and when this natural predisposition is not present, defective nourishment, and a debilitated state of the system are apt to induce it. Any long continued irritation of the nervous extremities, particularly of those distributed upon the mucous membranes, may be the exciting cause of this affection; hence, painful dentition, worms, an unhealthy state of the stomach, bowels or liver, or chronic and troublesome eruptions, or sores, or some disease or impurity of the blood, may prove the exciting cause of irritation of the brain or nervous system. When this state obtains, convulsions, it is well known, are apt to occur.

The most deceptive part of the disease is, that the preternatural excitement and mobility of the nervous system is apt to give rise to excitement of the heart and arteries, and determination of blood to the head, from the excited condition of the brain. If the case be regarded as one of active congestion or commencing inflammation of the brain, and treated allopathically and antiphlogistically, irrespective of the peculiar state of the nervous system, exhaustion will speedily follow, and the symptoms of reaction and excitement from loss of blood will be added; if the same treatment be still pursued, the case will soon end fatally, and probably be attended with effusion of water into the ventricles of the brain. If the body be examined after death, the effusion will of course be detected, and will be presumed to have been the cause of death; but the real truth is, in certain states of the nervous system, unpreceded by any great cause of exhaustion, an increased quantity of blood may be thrown to the brain, and give rise to all the symptoms of the first stage of an inflammatory affection, but which cannot be removed by the ordinary allopathic antiphlogistic means, as these will aggravate the original excited condition of the brain and nervous system, inducing new and still more dangerous symptoms, causing the case to terminate fatally, with all the signs of an advanced stage of dropsy of the brain.

In older patients these cases are apt to be attended with

much delirium; WATSON says they seem to be, but are not, cases of Meningitis of any kind. ABERCROMBIE refers to them as instances of a very dangerous modification of inflammation of the brain, which shows only increased vascularity, without any of the other signs or effects of inflammation. WATSON very decidedly asserts that he entertains no doubt whatever, about the nature of these cases, viz.: that they are not examples of inflammation at all, for they neither show the anatomical characters of inflammation, nor do they yield to the remedies for inflammation. In short, they were made to terminate fatally by Abercrombie's outrageous system of extravagant blood-letting. Apoplexy according to Abercrombie, may also arise from exhaustion, and terminate fatally, when treated actively by blood-letting, &c., without any morbid appearance being found in the brain after death, or with appearances so slight as to be altogether inadequate to account for the symptoms, or fatal termination of the case. (See treatise on Apoplexy.) ABERCROMBIE himself admits that in four fatal cases of Apoplexy, all the usual allopathic remedies were used in the most active manner without the least effect in alleviating any of the symptoms, and on inspection after death, either no vestige of disease could be discovered in the brain, or at most there was but slight fulness of the blood-vessels, insufficient to account for death, which was doubtless caused by the too active treatment.

Treatment.—NICHOLLS says that judicious treatment will throw muchl ight on the pathology of these cases. If there be any manifest cause of irritation present, either from teething, or a disordered state of the bowels or liver, and this be removed and the child then placed in as quiescent a state as possible, by excluding it from light and noise, and every source of excitement, giving a dose or two of some sedative, and nourishing but unstimulating diet, and subsequently a gentle tonic, all the symptoms of brain disease will vanish.

The most homœopathic remedies are: Coffea, Cannabis, Thea, Ignatia, Nux. If these fail to afford relief; Conium, Hyosciamus, Opium, Asafœtida, Chamomilla or Valerian may be tried.

COFFEA, THEA and CANNABIS may be used when the attack

has been brought on by excessive and pleasurable excitement, when the child is so excited and lively as to be almost uncontrollable, with sleeplessness, i. e. when the *grey* substance of the brain, and the senses or intellectual faculties are principally aroused, and stimulated.

Nux and Ignatia are the principal remedies, when the *white* substance of the brain, and the *motor* track and nerves are implicated; when there is a tendency to twitching, starting, &c., especially if the attack has been brought on by a fit of passion, vexation or disappointment.

Hyosciamus and Opium are the antagonistic remedies for Coffea and Thea, and may be used when these remedies seem indicated but fail to afford relief.

Conium is the antagonistic remedy for Nux and Ignatia, and may be given when these fail to afford relief.

II.—CONGESTION OF THE BRAIN.

IN CHILDREN.

According to West, Congestion of the Brain is a very frequent disorder in young children; he quotes Dr. Mauthner in proof, who on examining the bodies of 229 children, dead of various diseases, found a congested state of the blood-vessels of the brain, in no less than 186. West assumes that the brain in infancy is much more exposed to congestion and irritation, than that of the adult, owing to the far wider variations of which the cerebral circulation is susceptible in early life than subsequently. Nor is the cause of this difficult to discover. The skull of the adult is a complete bony case, and the firm substance of the brain, affords a comparatively unyielding support to the blood-vessels by which it is nourished. The variations in the quantities of blood which the brain of the adult contains, must needs be circumscribed within far narrower limits than in the child, whose cranium, with its membranous fontanelles and unossified sutures, oppose no such obstacle to the admission of an increased quantity of blood, while the soft brain keeps up a much slighter counterpressure on the blood-vessels than is exerted by the comparatively firm parenchyma

of the organ in the adult. Hence, if the circulation in the child be disturbed, whether from difficulty in the return of venous blood, as during a paroxysm of whooping cough, or from increased arterial action, as at the onset of a fever, or during the acute inflammation of some more or less distant organ, the brain becomes congested, and delirium, or stupor, or convulsions often announce the severity of the consequent disturbance of its function. The same causes too, which expose the brain to be over-filled with blood, render it possible for it to be drained more completely of its blood, than in the adult. This fact should always be borne in mind, when treating the diseases of infants, for debility, exhausting discharges, and especially excessive allopathic depletion will often quickly induce a bloodless state of the brain, and all the symptoms of Hydrocephaloid disease.

Hence, in the treatment of diseases of children, the physician must be constantly on the watch against congestion of the brain, as a condition which is very likely to come on, in the course of the most various diseases, and of affections even of quite distant organs. But it is not merely as a serious complication of many other diseases, that this congestion of the brain in children deserves notice: its importance depends still more on its constituting the first and curable stage of many diseases of the brain, which, unless arrested at the outset, soon pass beyond the resources of our art.—West.

Congestion of the brain may arise from irritation; from the presence in the blood of the poison of some eruptive disease, such as scarlet fever, measles, or small-pox; or the brain may become *actively* congested at the time of teething, or from feverish irritation of the whole system, or from exposure to the sun, or from a blow upon the head, or from the fever of inflammation of some distant organ, such as the lungs, stomach, or bowels, &c. Or a state of *passive* congestion may be induced by some mechanical impediment to the return of blood from the head, such as the general spasmodic compression of the blood-vessels such as occurs in general convulsions, or during a fit of whooping cough; or from the pressure of an overloaded stomach, or liver, or enlarged thymus or bronchial gland. Finally, *passive* congestion, may be merely the result of a languid cir-

culation, arising from debility, or exhaustion, or want of pure air, or of nourishing and sufficient food, such as occurs in diarrhœa or summer complaint, in which the child not only has a great drain upon the system, but either is unable to take or does not receive a sufficient of nourishing food, from a mistaken policy on the part of the physician.

Intense congestion of the brain is not a very unusual consequence of the irritation of the brain and nervous system, from the presence of the poison of some eruptive disease in the system, or from the acceleration and disturbance of the circulation at the outset of the eruptive fevers. Convulsions and apoplectic symptoms then, sometimes, come on suddenly in a child, previously to all appearances, in perfect health, and may even terminate in death in less than twenty-four hours. The brain will be found loaded with blood, but all the other organs of the body are quite healthy. We may be at a loss to account for such sudden and severe symptoms unless measles, scarlet fever or small-pox are prevailing, or some other child in the family or neighborhood is soon after attacked by one or the other of them. That this train of symptoms often arises from the presence of some morbid poison in the blood, is still more evident from the occasional results of repelling eruptive diseases of the scalp. Thus, Golding Bird relieved a child of Porrigo with external applications in three weeks; for a time it appeared in perfect health, but in the act of crying "Papa," it was attacked with a kind of spasm and dropped dead. Dr. Dendy has seen four similar cases, in which death occurred as suddenly, all in the respectable classes.

When congestion of the brain and convulsions precede the eruptive diseases, these symptoms as alarming as they generally are, comparatively seldom end in death; for they generally disappear almost as if by magic, on the appearance of the eruption, except in those few cases in which the quantity of the poison is so great, that it cannot all make its escape upon the surface; or in which the congestion of the brain is kept up by the intensely feverish state of the whole system.

The presence of some irritating substance in the blood, also obtains in those cases in which convulsions, or irritation of the

brain arises from suppression of perspiration, scantiness of urine, deficiency of bile or some other secretion.

Another cause may aid in keeping up or increasing the pressure upon the brain in feverish disorders, viz.: an absolute expansion or increase of the volume of the blood; the most marked instance of this is in congestion of the brain from exposure to the heat of the sun, even though the head has not been unprotected from its rays. Of this WEST saw a striking instance in the case of a delicate boy, who when a year old, was taken out by his nurse, during one of the hottest days of summer. He was quite well and cheerful when he left the house, but, after being out for some time, began to breathe hurriedly and irregularly, and his nurse in consequence brought him home. He was restless, fretful and alarmed; his surface generally hot, and his head especially so, the brain pulsating forcibly through the anterior fontanelles; the pulse too rapid to be counted; the respiration hurried, labored and irregular, and there were constant startings of the tendons of the extremities. The child was on the eve of convulsions, but the tepid bath relieved the heat of the skin, and the expansion of the blood, the pulse fell and the twitchings diminished. Light and sound were excluded; he fell asleep and awoke in a few hours refreshed and tranquillized, and on the next morning a little languor was all that remained of an illness which seemed likely to prove so formidable.—WEST. Cooling and soothing remedies are required in almost all cases of irritation, congestion, or expansion of the blood.

Disorders of the nervous system are very frequent during the period of teething. Many of the symptoms which then occur, are the direct result of irritation of the tri-facial nerve, but others are the immediate consequence of congestion of the brain. Febrile disturbance almost always attends upon the process of dentition, and when the circulation is in a state of preternatural excitement, a very slight cause may suffice to overturn its equilibrium, and occasion a greater flow of blood to the brain than the organ is able to bear. Suppression of perspiration, deficiency of bile and scantiness of urine, often occur during dentition and leave the blood overloaded with effete and irritating substances.

According to WEST, congestion of the brain may come on very suddenly, its symptoms being alarming from the first, and such as to call for immediate interference; or general uneasiness, a disordered state of the bowels, which are generally, although not invariably constipated, and feverishness may precede the more serious attack by a few days. The head becomes hot by degrees, the child grows restless and fretful, and seems distressed by light and noise, or sudden motion, while children who are old enough sometimes complain of their head. Usually, too, vomiting occurs repeatedly, a symptom which is not only confirmatory of others, but also may exist before there is any well-marked indication of the head being affected, and when, though the child seems ailing, there is nothing definite about its illness. The degree of fever which attends this condition varies much, and its accessions are irregular; but the pulse is usually much and permanently quickened; and, if the skull be unossified, the anterior fontanelle (or soft spot on the top of the head,) is either tense and prominent, or the brain is seen and felt to beat forcibly through it. The sleep is disturbed, the child often waking with a start, while there is occasional twitching of the muscles of the face, or tendons of the wrist. The child may continue in this state for many days, and then recover its health, with or without medical interference; but, a slight cause will generally suffice to bring back the former indisposition. Striking instances of this are often seen while children are teething; the fever may subside, the head grow cool, and the little patient appears quite well as soon as a tooth has cut through the gum, but the approach of each other tooth to the surface will be attended by a recurrence of the symptoms. Yet, we cannot always reckon on such a favorable result occurring; for the symptoms above mentioned are sometimes the indications of the system generally having begun to suffer from mischief which has been going on for months unnoticed, and which is now about to break out with all the formidable characters of acute dropsy of the brain. Or, should they have no such serious import, yet congestion of the brain is itself a serious and sometimes a fatal malady. Even though on treatment being adopted, the heat of the head may diminish, and the flush and heat of the face grow slighter and less constant, still

the countenance may become very heavy and anxious, the indifference to surrounding objects may increase, and the child finally lie in a state of torpor or drowsiness; from which, however, it can at first be aroused to complete consciousness. But after being aroused, it soon subsides into its former drowsiness; the bowels generally continue constipated, and the vomiting seldom ceases, though it is sometimes less frequent than before. The pulse usually becomes smaller than in the first stage, and though there is often irregularity in its frequency, no actual intermission occurs. An attack of convulsions sometimes marks the transition from the first to the second stage; or the child passes without any apparent cause, from its previous torpor into a state of convulsions, which subsiding, leaves the torpor deeper than before. The fits may return and death take place in one of them, or the torpor growing more profound after each convulsive seizure the child at length dies comatose.

The *second* stage, if it may so be called, is usually of short duration, and if relief be not afforded by appropriate treatment, death is seldom delayed beyond forty-eight hours from the first fit, though no graver lesion may be discovered afterwards than a gorged state of the vessels of the brain and its membranes, and perhaps a little clear fluid in the ventricles and below the arachnoid.

Occasionally, death does not so speedily follow these symptoms; but they may continue slightly modified for days, or even weeks, and contrary to all expectation, recovery now and then takes place, especially in very young children, in whom the congestion having relieved itself by a copious effusion of water into the ventricles of the brain, the yielding skull accommodates itself to its increased contents. This chronic dropsy of the brain may even admit of cure.

Treatment.—The principal homœopathic remedies are: Glonoine, Opium, China, Ferrum, Belladonna and Stramonium. If these fail, their antagonistic remedies, Aconite, Digitalis Conium or Veratrum-viride may be used. (See Treatise on Apoplexy.)

INFAMMATION OF THE MEMBRANES OF THE BRAIN.

I.—INFLAMMATION OF THE DURA MATER.

According to Rokitansky, *primary* inflammations of the dura mater to any extent, such, for instance, as would lead to the formation of matter, are of rare occurrence, with the exception of those which are brought on by injury.

On the other hand, inflammations of slight degree, and usually combined with moderate inflammation of the bones of the skull, are frequent. They are characterized by vascularity and rosy-redness of the dura mater, and by softening of its texture; they give rise to interstitial infiltrations of the membrane with the products of inflammation, as well as to exudations upon that surface of it which adjoins the bone; such exudations become organized into loose cellular, or thick fibrous tissues, or at length, especially if there be any attendant inflammation of the bone, into bone; and they bring about a preternatural adhesion to the inner surface of the skull. These patches of inflammation are often widely spread, especially along the sutures; but sometimes they are confined within a smaller compass, so as to form circumscribed islands. Exudations which become converted into bone are generally spread out into a thin layer like that of puerperal osteophyte; they are first spongy, but gradually become compact: sometimes they form a mass of bone which looks as if it had flowed or dropped upon the membrane, and then coagulated; while, not unfrequently there are circumscribed plates or nodules, which, though they in course of time become intimately united to the bone, yet originally adhered firmly to the dura mater.

When the inflammation is more *intense*, and runs a *chronic* course, the dura mater acquires an increase in thickness, sometimes to the extent of three lines, and even more; it becomes indurated and callous, and usually adheres more closely than natural to the bone.

When the inflammation is brought on by injury, or extends to the dura mater from the neighboring tissues, it frequently

terminates in the production of pus, and in suppurative degeneration of the membrane. These cases are of great importance, for they are generally secondary to inflammation and suppuration of the bone, or of the neighboring ligamentous structures. They are especially apt to occur in certain localities; thus, the dura mater often inflames, suppurates and sloughs from caries of the bones of the internal ear, and the labyrinth of the ethmoid bone of the nose; from caries of the upper bones of the spine, and suppuration of their ligaments. In the dura mater these processes remain limited and circumscribed, but when they reach the inner membranes of the brain, they usually spread rapidly into general meningitis.

Symptoms.—Inflammation of the dura mater according to WATSON rarely occurs as a spontaneous disease, but is not at all uncommon as a result of external injury. Its symptoms have been excellently well described by POTT: A man receives a blow upon the head; the blow stuns him perhaps at the time, but he presently recovers himself, and remains for a certain period, apparently in perfect health. But after some days he begins to complain; he has pain in his head, is restless, cannot sleep, has a frequent and hard pulse, a hot and dry skin, his face becomes flushed, his eyes red and ferrety; chills, nausea and vomiting supervene, and towards the end, convulsions and delirium. Meanwhile the part of the head which has been struck becomes puffy, tumid and sometimes tender, and if this tumid part of the scalp be cut through, the pericranium beneath is found separated from the skull; and the bone of the skull itself is observed to be altered in color, whiter and drier than the healthy bone; and if a piece of the bone be removed, it is also seen that the dura mater, on the under side of it is detached from the skull, and sometimes smeared with lymph or puriform matter. This is a disease which is often met with by the surgeon.

According to SOUTH and CHELIUS inflammation of the dura mater may be *acute* or *chronic.*

Acute inflammation of the dura mater appears most commonly from the third to the fifth day after the injury; the patient complains of severe oppressive headache, which spreads from the injured part over the whole head; the heat of the

head is increased; the pulse is small, compressed and rather hard; the patient is heavy and difficult to arouse; his ideas become unconnected, and quiet delirium comes on; and lastly, when the inflammation proceeds to suppuration, the patient falls into a state of continued stupefaction, from which he cannot be easily aroused; convulsions come on, with continued shivering and irregular pulse; the pupils are wide and fixed; the breathing snoring and slow; the sphincters are paralyzed and finally the patient dies.

On dissection, the dura mater is found reddened, covered with exudations, and separated from the inside of the skull; pus may be found between it and the skull, and at this part the dura mater is often gangrenous.

Chronic inflammation of the dura mater, from injury to the head, often commences only after a long space of time, often after seven or fourteen days, often after a month; it begins with headache, mental and bodily depression, heaviness, unsteady walk, derangement of the stomach, quick pulse; and in its further course a circumscribed painful swelling of the scalp commonly arises at the place of injury; or, if there be a wound, it becomes pale, and secretes a thin, sanious fluid, which sticks fast to the bandages. The pericranium suppurates around the wound, and the inflammation soon runs into exudation of a yellowish, ichorous, purulent fluid, which collects either between the skull and the dura mater, or between the latter and the surface of the brain. The patients sometimes die twelve or eighteen months after the injury. South has seen several cases of this chronic inflammation, which is always a serious disease, and very difficult to control; often indeed entirely unmanageable under allopathic treatment. The patient then goes on slowly from bad to worse; sometimes with intervals of improvement, and sometimes without, and will frequently live for many months in a constant state of suffering.

According to Watson the next most frequent cause of inflammation of the dura mater, after injuries of the head, is disease of the internal ear, and of the petrous portion of the temporal bone. Sometimes acute inflammation arises within the tympanum, when there has been no previous disease of the ear: the patient has severe earache; at length a gush of mat-

ter comes from the external meatus, but the pain does not cease, as it usually does in such cases; it continues, or even increases in intensity; the patient begins to shiver, becomes dull and drowsy; slight delirium perhaps occurs, and by degrees he sinks into stupor. In some instances no pus issues externally. More commonly symptoms of the same kind supervene upon a chronic discharge of purulent matter from the ear, especially as a sequel of scarlet fever. In some of these cases there is no symptom to mark the extensive mischief going on within the head, except the intense pain; the pulse may not be quickened, the skin may be warm but moist, and there may be neither fever, delirium or convulsions. In other cases, besides the intense pain in the head, there may be vomiting, intolerance of light, slight and transient delirium, a degree of stupor, and slight convulsions.

In some cases, pus is absorbed from the ear, and diffuse inflammation of the veins with terrible consequences in various parts of the body may ensue. In such cases the complaint is marked by pain in the head, fever and chills which intermit; and so regular sometimes are the intermissions that the physician may be led to believe that he has fever and ague to deal with; then pain and swelling of some of the joints may come on, leading to the belief that the case is complicated with rheumatism; but the true and alarming nature of the case will soon become apparent; abscesses form in and about the affected joints, and if they be opened, foul, grumous and dark colored matter will be let out. The patient will generally have more or less fever, with dry parched tongue, rapid and feeble pulse, with more or less diarrhœa.

In short, in these cases the patient has pain in the ear, with discharge of pus from the external meatus, followed by pain in the head coming on with fever and chills, and followed after a short interval by destructive suppuration in several distant parts; all forming a chain of presumptive evidence that the fatal mischief finds its entrance into the head and rest of the system through the porches of the ear.

Although *quotidian* paroxysms of fever have been noticed in several cases, still in one case at least the fever bore a *tertian* type: A young man previously healthy was attacked with fits

of shivering, accompanied by pain on the left side of the head; at first the paroxysms were rather irregular; but they soon assumed the form of *tertian* ague, coming on every other day, at about the same hour; the cold fit commencing at noon and lasting about half an hour, followed by a hot fit of somewhat longer duration, and terminating in profuse perspiration. In the intermissions the pain in the head was trifling, there was no thirst or fever, but the patient did not sleep. A tumor formed over the mastoid process, and was opened, giving issue to a quantity of extremely offensive brownish pus, followed by great relief; but in about ten days the pain in the head and ear became very severe, with violent shivering fits many times a day, great thirst, heat of skin, vomiting and delirium; his face was flushed and pulse hard; he soon died.

Suppuration of the tympanum and consequent disease of the bone, are more common in scrofulous persons than in others; and they are more apt to occur as sequelæ of scarlet fever, than in any other way.

Treatment.—The remedies which act principally upon the sero-fibrous tissues are most specific in this disease, viz.: Aconite, Bryonia, Mercurius, Mezereum, Colchicum, &c.

When it arises from a mechanical injury to the head, the treatment may be commenced with *Arnica*, internally and externally; when fever arises, *Aconite* should be used internally, and the Tincture of the Root should be applied freely and repeatedly to the external surface of the head, avoiding the cut or wounded surfaces; if the case progresses steadily, *Mercurius* should be given in alternation with Aconite; if signs of effusion of serum and fibrine from the inflamed membrane arise, Bryonia, Mezereum, Hellebore or Colchicum, should be used in alternation with Mercurius, or the Iodide of Mercury; if the symptoms of purulent exudation arise, Tartar-emetic, or Hepar-sulph., Sabina or Thuya should be given.

INFLAMMATION OF THE ARACHNOID.

ARACHNITIS.

The arachnoid membrane is a shut sack, the *parietal* layer of which is attached to the dura mater, while the *cerebral* or visceral layer is for the most part blended with the pia mater of the brain.

Inflammations of the *parietal* layer of the arachnoid, are on the whole of frequent occurrence; their pathological import, however, is according to Rokitansky, mostly subordinate; they are met with, from injuries of the skull, from what is called a phlogistic state of the blood, in pynæmia, in the course of acute eruptive diseases, in Bright's disease, and acute biliary dyscrasia. They are commonly slight in degree; the inner surface of the dura mater is then found streaked with delicate red vessels, and is of a clear rosy tint; it is lined with an exudation, that may be delicate or greyish, and soft like a layer of mucus; or more consistent and membranous, or yellow, loose and pus-like.

In some rarer cases, this inflammation of the *parietal* layer has all the appearance of being primary, and judging from the amount of its products, also severe. These processes usually take place, and furnish their products without being accompanied by any similar disease in the *cerebral* layer: even in the intense primary inflammation, just alluded to, the change which takes place in the cerebral layer is limited to cloudiness and thickening; the false membrane very rarely produces any adhesion between the two surfaces.

Inflammation of the *cerebral* layer of the arachnoid presents peculiar appearances, in respect to the condition of the *pia mater*. We find on the one hand, that, *as arachnitis is not usually fatal in itself*, or at least not in an early stage, it sometimes leaves traces of its existence, in pretty extensive thickenings of the membrane; in free exudations on its surface, which become converted into circumscribed tendinous patches, or diffused false membranes, &c., *whilst very trifling changes are discoverable in the pia mater*, to indicate that an inflam-

matory process occurred at the same time in it. When, on the other hand, the pia mater is acutely inflamed, and there is profuse exudation into its tissue, the subjacent arachnoid *is in no marked degree affected*, and its surface is entirely without any free exudation. Showing that the inflammations of the two membranes are entirely different and distinct, and that specific remedies must be found to act curatively upon each.

Purulent exudation on the free surface of the arachnoid takes place on the *parietal* layer only when the dura mater is very acutely inflamed in consequence of injury of the skull and caries, proving that remedies which act specifically upon the bones and dura mater, will also probably act specifically in inflammations of the *parietal* layer of the arachnoid; and on the *cerebral* layer, only when a simultaneous acute inflammation of the pia mater also gives rise to an exudation of pus; proving that remedies which act specifically upon the pia mater, will also probably act specifically upon the *cerebral* layer of the arachnoid.

It is remarkable that true tubercular exudations do not occur on the arachnoid; proving that remedies which act specifically upon the arachnoid may prove antidotal to tubercular disease.

Finally, according to Rokitansky, on whichever layer of the arachnoid these processes take place, that portion which corresponds to the *convexity* of the hemispheres of the brain is exclusively affected; and in proportion as they approach the base of the brain, (which they occasionally do), the intensity of the inflammation, and the quantity of their products is palpably diminished; again proving that remedies which act specifically upon the upper surface of the brain, and upon the arachnoid are antagonistic, or antidotal to tubercular disease, which acts principally upon the base of the brain, and upon the pia mater.

Symptoms and Treatment.—These are very similar to those of simple inflammation of the pia mater, and cannot be definitely given in the present state of our knowledge.

INFLAMMATION OF THE PIA MATER.

MENINGITIS.

This is the *true meningitis*, and the most important disease of the membranes of the brain. According to Rokitansky it is impossible to depict its general features without distinguishing *two* totally different forms of the disease.

a) *First form.*—This is a true inflammatory affection; it usually extends over the *convexity* of the brain, and diminishes in intensity as it approaches the base. It rarely occurs at the *base* of the brain at all.

The individuals who present this form of disease are generally in the youthful period, the bloom of life; they are usually strong, at any rate they show no trace of the tubercular dyscrasia.

The disease is usually unaccompanied with acute dropsy of the brain; at least the exudations and effusions found in the ventricles are mostly slight; so also, softening of the stomach does not usually accompany or result from it.

Except at its periphery or convexity, the brain is unaltered by it, especially no softening of the brain arises or results from it.

It is a pure inflammatory affection and if any specific remedies against simple inflammation are known in any school of medicine, it ought to be a perfectly manageable disease. In fact Rokitansky says, although this form of meningitis is frequently fatal, yet it often terminates in resolution. A chronic form of it is frequently found in mental disease, especially in cases of secondary imbecility; yet it is frequently acute and even epidemic.

b) *Second form.*—This is the most frequent and fatal disease of the membranes of the brain, especially in children. It occurs according to Rokitansky almost exclusively at the base of the brain, and the peculiar opaline, flocculent, albuminoserous, gelatinous, sero-purulent effusions and exudations which attend it, accumulate especially between the hemispheres of the brain on each side, from the optic commissure in front to the

pons, and even over the medulla oblongata behind. From thence they may be traced into the fissure of Sylvius, and the longitudinal fissure of the brain, and so on to the convex surface of the hemispheres; for the fibrino-tuberculous product accumulates along the vascular trunks which run in the fissures, viz.: the arteries and veins of the fissure of Sylvius and Corpus-callosum, and the latter often appear completely enveloped in the exudation.

From these points the inflammation always extends also to the choroid plexuses and the lining membrane of the ventricles, particularly the lateral ventricles, and there gives rise to the effusion and exudation of similar products, from which a distinct purulent sediment is often deposited; hence it is almost always combined with acute dropsy of the brain; and very often it is also associated with softening of the stomach.

The brain itself is always in a state of acute œdema, or serous infiltration, with hydrocephalic swelling. At those parts where the disease is most intense, and particularly in the fissures of Sylvius, the convolutions of the brain, especially at the superficial parts, become the seat of red, or yellow softening.

The subjects of this form of the disease are mostly children, although it is also frequent at later periods of life. The individuals who are attacked with it are generally persons already suffering with the tuberculous dyscrasia, or those in whom tubercle is actually deposited.

The base of the brain is the chief seat of this form of tuberculosis; from thence it extends towards and over the hemispheres; it is rare to find the convex surface of the brain the principal seat of its development.—Rokitansky.

It is the most frequent and fatal disease of the head; as it is generally associated with the deposit of tubercles in other, and often many other organs, with extensive dropsy and softening of the brain, and with decided softening of the stomach, there is almost necessarily scarcely any chance of recovery.

Symptoms of primary meningitis.—This disease is most frequent in persons from the age of sixteen to forty-five years; next, in children from five and a half to eleven years; it is very rare in infants, and more common in males than females. It is most frequently caused by exposure to the sun, by excessive

intellectual labor, by intemperance in drinking, and by depressing mental emotions; in children it is most common during dentition, or from suppression of eruptions of the scalp.

In the simple, *primary* form of the disease, the *pain in the head* is always very prominent, and sets in at the very beginning of the attack; it is violent and continued, with more or less severe exacerbations; it often obliges the patient to cry out; it is complained of spontaneously and unceasingly; the patient insists that his disease is solely in his head, can point to the exact seat of it, and complains of it until he falls into a state of unconsciousness.

The *intelligence* is very quickly involved in the great majority of cases; there is great mental agitation, soon followed by active delirium, which is sometimes violent, or even furious. The patients are apt to get out of bed, and attempt to jump out of the window, &c. This is soon followed by somnolence, which alternates at first with the delirium, but finally settles into a profound coma, or complete loss of consciousness.

The *eyes* are sensitive to light, the pupils are almost always dilated, but at times they are contracted or irregular; they finally become immoveable, and in some cases vision is entirely abolished; squinting is also frequently observed, especially in children.

The *nerves of motion* do not ordinarily present any peculiar symptoms, especially in the early stages of the disease, except that the patient is apt to totter and fall if he attempts to rise; at a later stage, however, we often notice stiffness of the limbs, or spasmodic contractions, or even convulsions; but these symptoms are not constant. Towards the end of the attack, subsultus, carphologia, and convulsive movements are generally present. It is rare that we observe partial stiffness of one limb, or paralysis; when these are present, there generally is a simultaneous affection of the brain itself.

Sometimes *the nerves of sensation* are blunted, either throughout the whole body, or in more or less extensive parts; at times, however, there is an increase of sensibility, at least for a time.

The countenance is generally animated, the eyes haggard and brilliant; there are frequent alterations of color, from red to violet, and thence to pallor, more or less intense. Sometimes

the features are contracted and grimacing, at others they are relaxed. The eyes often express astonishment, fright or fury; at others they seem dull, glassy, and without expression; at times they are prominent, at others sunken. An unintelligent smile often flits over the features. The nostrils are generally dry; the lips pale and parched.

Of the symptoms of the *digestive organs*, the *vomitings* are without doubt the most remarkable; they are generally bilious, and often abundant; they often cease on the second or third day of the attack, but sometimes persist to the end, although they may intermit for a time, to be renewed again. The *tongue* is generally dry, often red, or covered with various kinds of coating. *Constipation* is also one of the most constant symptoms; it generally sets in from the beginning, and may even precede the other phenomena.

The *breathing* is generally remarkably irregular.

Fever is always well marked, the pulse is quick and hard at first; afterwards it becomes small and irregular. The skin is hot and remarkably dry.

Secondary meningitis occurs during the course of some other disease, especially typhoid fever; the headache is apt to be not very well marked; the vomitings are often absent; the most remarkable symptoms are the softness, and irregularity of the pulse and respiration, the paleness and expression of anxiety upon the face, and the extreme agitation which precedes the delirium.

The *course* of the disease is onwards, and although there are some exacerbations, yet the remissions are not as notable as in tubercular meningitis. The *duration* of the disease is very short; it does not last longer than from three to nine or eleven days.

Diagnosis.—Inflammation of the pia mater may be mistaken for tubercular meningitis, or for typhoid fever. But in tubercular meningitis there are generally preceding signs of ill-health, or of tubercular disease; the symptoms of inflammation of the pia mater set in more suddenly, are more severe from the onset, and persist more actively; the headache is more violent, also the heat of the head, redness of the face and intolerance of light; the delirium is also more intense; the vomitings are

more frequent and abundant; the fever more severe and constant. The symptoms progress more rapidly and regularly.

It may be distinguished from typhoid fever by the less frequent vomiting, more frequent pains in and distension of the bowels, with diarrhœa, which are so characteristic of the latter disease; enlargement of the spleen may also be distinguished by percussion; bleeding from the nose and ringing in the ears, the rose colored spots, sudamina, the regularity of the pulse and breathing, and absence of rigidity or paralysis of the limbs will also serve to distinguish the two diseases.

Treatment.—If the symptoms of arachnitis or meningitis begin to show themselves, or even if the disease be fully developed we may begin the treatment with *Aconite;* it acts specifically upon the serous and fibrous membranes, and is thought to be homœopathic to all acute inflammations, while physicians of the dominant school suppose it to be as antipathic to all acute inflammations and congestions as Digitalis or Veratrum-viride. According to KREUSSLER it is not a question of fever or no fever, for an acute inflammation of the brain as well as of the meningeal membranes requires the use of Aconite, from the commencement of the disease until the period when essential changes develop the full characters of the affection. He says it is always safe to commence the treatment with a few doses of Aconite, even if it be possible to discern the homœopathicity of another and apparently more specific remedy from the very beginning of the attack.

Dose.—Of course, in so serious a disease, the remedy should be used promptly and thoroughly; it should be given not only internally, but also applied externally, and that right freely. I have been in the habit of applying the Tincture of the *Root* of Aconite, over a large portion of the scalp, every 2, 4, 6 or 8 hours, according to the severity of the symptoms. The Tincture of the *Plant* may be given in repeated doses, every $\frac{1}{4}$, $\frac{1}{2}$, 1 or 2 hours, in acute and rapid cases; every 2, 4 or 6 hours, in sub-acute and slighter attacks.*

If the case progress, so that it is probable that exudations of plastic lymph or sero-fibrous effusions have already commenced to take place, then *Bryonia* and *Mercurius* are the most important remedies; if there be much vomiting with obstinate constipation, great heat of head and much fever, one or two full

* The dilutions and pellets are probably not useful in cases of meningitis of any kind.

doses of *Mercurius* may be given so as to bring about free action upon the bowels. Small doses of *Tartar-emetic* may also serve to allay the irritability of the stomach, to moderate the fever, tend to produce perspiration and aid the action upon the bowels; but they must not be continued long, or else too great prostration may be produced. The Tartar-emetic must be quickly changed to alternate doses of *Bryonia*, and small but repeated doses of Mercurius. If Mercurius be at all indicated it may also be allowable to apply a weak solution or ointment upon the scalp, in the immediate neighborhood of the seat of the disease.

If it becomes apparent that a large effusion of serum, has taken place from the inflamed membranes, *Helleborus*, *Digitalis*, *Kali-hydriodicum*, and *Mercurius-iodatus*, become the principal remedies. If Hellebore and Digitalis, either singly or in alternation fail to produce an alleviation of the symptoms, Kali-hydriodicum may be applied over the whole of the scalp in solution, or in the form of an ointment, and frequently repeated small doses may be given internally. If these also fail, Iodide of Mercury may be applied in the form of an ointment over the scalp, and small doses of this, or of Mercurius-corrosivus may be given internally.

If an almost entire suppression of urine occur, *Cantharides* will prove the most homœopathic remedy. It is far more homœopathic to inflammations of the membranes of the brain than either Belladonna, Stramonium or Hyosciamus, which only produce congestion, rarely inflammation of these parts. *Cantharides* has caused congestion of the vessels of the brain; thickening of the arachnoid of the brain, but especially of the cerebellum, which is covered with a very thick layer of lymph, while a large quantity of serum has been found at the base of the brain. As the suppression of urine in arachnitis and meningitis, does not depend upon an inflammation of the kidneys, but upon a torpid or semi-paralytic state of these organs from pressure upon the brain, *Cantharides* which acts far more specifically upon the kidneys, than upon the brain or its membranes, may arouse the former organs from their torpor, and bring on a secretion of urine which may relieve the pressure upon the brain; at the same time it will not exert an injurious or too

irritating effect upon the brain or its membranes, as the stage in which it is most indicated, and hence is most useful, is that in which the profuse exudation of fibrine and copious effusion of serum from the meninges of the brain has brought about a resolution of the inflammatory congestion of these organs, and left them in a state of torpor from over-exertion and secretion, which will not bear debilitating remedies, and may tolerate exciting or stimulating ones; the depressed state of the general system when copious effusion has taken place, marked by sopor with complete insensibility to external impressions, with a small feeble and intermitting pulse, coldness and clamminess of the skin, calls for the use of stimulants, and Cantharides may prove the best, from its specific relation to the seat and nature of the disease, and its marked power over the secretion of the kidneys, which it is so important to restore. If the case be not absolutely hopeless, and the internal use of Cantharides does not produce the desired effect, and the physician and parents are willing to inflict some suffering in the hope of saving life, which might otherwise be lost, a blister of Cantharides may also be applied to the back of the neck, or even to the scalp. But such an extreme and severe measure should only be used in cases of pure or simple arachnitis, or meningitis; if it be at all probable that *tubercular meningitis* be present, all temptations to severe and active measures should be steadily rejected by the physician, whose sole endeavors in such almost invariably hopeless cases, should be directed towards soothing and allaying any and every painful symptom of the case; narcotic remedies, such as Belladonna, Conium, Hyosciamus, Opium, or Stramonium, or Cannabis-indica, or Chloroform should be used freely and without hesitation. To save life is next to impossible; to allay suffering is both possible and imperatively demanded.

It may be allowable to mention here that Dr. Hahn has succeeded several times with the cold affusion, in arousing and curing children, after the supervention of complete coma. He has also succeeded in 14 cases, after the patients were in an apparently hopeless state of coma, with frictions of the scalp, with Tartar-emetic ointment repeated every two hours, until pustulation was established; it is a severe measure and occasionally induces gangrene of the scalp, yet it is perhaps allowable in the advanced stages of simple inflammatory meningitis.

TUBERCULAR MENINGITIS.

IN CHILDREN.

This is one of the most common diseases of the brain or its appendages in children. It is by far the most common cause of so-called acute- or sub-acute dropsy of the brain, and furnishes a satisfactory reason why this disease is so frequently fatal under every variety of treatment, at the same time that it renders it self-evident that any physician or class of physicians who pretend to cure the majority of their cases of dropsy of the brain, are either self-deceived, or are absolute impostors.

Green says that at least one-fourth of all the diseases of the brain in children are tubercular in their nature; Becquerel in 30 cases of meningitis, found tubercular granulations in the membranes of the brain in no less than 28; Jackson found them in 4 cases out of 6; Green discovered them in 56 cases out of 60; Rilliet and Barthez in 29 cases out of 33; Bouchut in 6 cases out of 9. Hence in 138 cases of so called acute hydrocephalus, tubercles were found in no less than 123 instances. Hence it is evident that until within a few years, tubercular meningitis, simple acute meningitis, independent of tubercularization, and simple dropsical effusion within the cavity of the skull, independent of inflammation have been confounded together under the single term of hydrocephalus or water on the brain.

Symptoms.—Unlike acute simple meningitis there is more or less of a premonitory stage. According to West, in the first or premonitory stage there are many indications of cerebral congestion, coupled with general febrile disturbance; and presenting exacerbations and remissions at irregular periods. The child becomes gloomy, pettish and slow in its movements, and is but little pleased with its usual amusements. Or, at other times its spirits are very variable; it will sometimes cease suddenly in the midst of its play, and run to hide its head in its mother's lap, putting its hand to its head, and complaining of headache, or saying merely that it is tired or sleepy, and wants to go to bed. Sometimes, too, it turns giddy, as may be known, not so much from its complaint of dizziness, as from its suddenly standing still, gazing around for a moment as if lost, and

then either beginning to cry at the strange sensation, or seeming to awake from a reverie, and at once returning to its play. The infant in its nurse's arms betrays the same sensation by a sudden look of alarm, a momentary cry, and a hasty clinging to its nurse. If the child can walk, it may be observed to drag one leg, halting in its gait, though but slightly, and seldom so much at one time as at another, so that both the parents and the physician may be disposed to attribute it to an ungainly habit which the child has contracted. The *appetite* is usually bad, though sometimes very variable, and the child, when apparently busy at play, may all at once throw down its toys and beg for food; then refuse what is offered, or taking a hasty bite, may seem to nauseate the half-tasted morsel, may open its mouth stretch out its tongue, and heave as if about to vomit. The *thirst* is seldom considerable, and sometimes there is an actual aversion to drink as well as to food, apparently from its exciting or increasing the nausea. The *stomach*, however, seldom rejects everything, but the same food that occasions sickness at one time is retained at another. Sometimes the child vomits only after taking food; at other times, even when the stomach is empty, it brings up some greenish phlegm, without much effort, and with no relief. These attacks of vomiting seldom occur oftener than two or three times a day, but they may return for several days together, the child's head probably growing heavier, and its headache more severe. The *bowels* are generally constipated from the first; the evacuations are usually scanty, sometimes pale, often of different colors, almost always deficient in bile, frequently mud-colored and very offensive. The abdomen is seldom full or distended, but the child sometimes complains of pain in the belly, which may be tender to pressure. The *tongue* is not dry, generally rather red at the tip and edges, coated with white fur in the centre, which becomes yellowish towards the root; occasionally West has seen it very moist, and uniformly coated with a thin white fur. The *skin* is harsh, but there is no great heat of surface. The *nostrils* are dry; the *eyes* lustreless; the *pulse* accelerated, but seldom exceeding 120 in children of four years old and upwards, not full and strong, but often unequal in the force and duration of its beat.

The child is apt to be drowsy, and will sometimes want to be put to bed two or three times in the day; but it is restless, sleeps badly, grinds its teeth in its sleep, lies with its eyes partially open, awakes with the slightest noise, or even starts up in alarm without any apparent cause. At night, too, the existence of intolerance of light is often first noticed in consequence of the child's complaints about the presence of the candle in the room.

West truly says, that we must not expect to find all these symptoms in every case, neither indeed, when present are they persistent, but the child's condition is very apt to vary greatly in the course of a few minutes; cheerfulness alternating with depression, and sound sleep being now and then enjoyed in the midst of the unrefreshing dozes of the night.

Hartmann says, the precursory stage does not offer any of the characteristic symptoms of acute dropsy of the brain. Thus the child, which was previously able to run about with ease, has an unsteady vaccillating gait; he raises his feet high from the floor, or is liable to fall on the level ground, even in the room. This unsteadiness communicates itself to the whole body. We observe, moreover, a sudden change of disposition; in the place of the former cheerfulness and lightness of heart, the child is apt to become morose and peevish. On moving the head suddenly, or raising it from the recumbent posture, vertigo or a sense of stupefaction is experienced. In some cases the secretion of urine is scanty, in others it is turbid, flocculent or opalescent. Some authors number a fine, dry, colorless eruption on the outer side of the upper arm, on the cheeks and lips among the precursory symptoms of dropsy of the brain.

Besides these symptoms there are others which are more or less characteristic; such as a loss of the previous blooming appearance; restless sleep during which the child is apt to moan, groan, start up as in a fright, alternations of creeping chills and flushes of heat; a pulse of the ordinary rapidity, but one which intermits at times, or beats irregularly or more feebly.

If many of these symptoms be present, the physician should be led to suspect the impending approach of dropsy of the brain and to watch the development of the symptoms with anxious and redoubled attention. If the child be descended from scrofu-

lous or consumptive parents it may already be too late to save life; the tuberculous dyscrasia may already be so fully developed, or the blood be already so fully overloaded with tubercular matter, or the capillary vessels may have lost their power and function of forming or separating healthy materials from the blood, that it will be impossible to prevent the formation and deposition of tubercle in the membranes of the brain, or even in many other organs. Still the trial must be made, late though it be. But in order to treat the tuberculous tendency or dyscrasia with the faintest hope of success, we must first understand, thoroughly understand, of what tubercle consists, and what it really is.

TUBERCULOSIS.

TUBERCLE.

The physical description of tubercle is well known to every physician, the *chemical* is not so. According to Hasse, who drew his conclusions from numerous analyses carefully compiled by Cerrutti and Vogel, the organic component parts of tubercle are principally *Caseine*, with some fat, and a little albumen. According to Preuss the animal portion of tubercle is principally made up of *Caseine*, with some fat in the form of Cholesterine, and a trifle of Phymatine. Güterbock found much *Caseine*, some Albumen, Phymatine and fat.

Less accurate observers, such as Thenard, found Albumen in excess; while Hecht and Scharlau, who probably did not separate the cellular and other tissues, or products of inflammation found intermixed with the surrounding tubercular masses, found nearly equal proportions of Gelatine, Albumen and Fibrine, in their analyses of tubercular substance.

Ancell, justly says, if we admit that tubercle is a definite chemical compound, which is very probable, still this compound must be subject to changes and to admixture with numerous extraneous and accidental materials, as with those composing the tissues in which the tubercle is deposited, and which by pressure and otherwise, become disintegrated and blended with the essential constituents of tubercle, or with the products of inflammation, such as coagulable lymph, or fibrine, or pus from

inflammation of the substance of the tuberculous organ, or with mucus or pus from the mucous membrane of the lungs, or with blood itself. It is always difficult, and frequently impossible, for the chemist to separate these different products, or to estimate their proportions. Tubercle must also, from the same causes, exhibit differences, according to the nature of the tissue in which it is seated. Still, he says, chemical analysis leaves no doubt that tubercle contains a protein compound as an essential constituent, which appears to bear a close analogy to, if it be not identically *Caseine*. Tubercle has a decidedly cheesy appearance to the naked eye, and tuberculous pus resembles a mixture of soft cheese and water both in color and consistence. ANCELL repeats that the *caseous* quality of tubercle and scrofulous pus indicates the presence of a nitrogenous compound of a caseous nature in the liquor tuberculi, showing that from the liquor sanguinis of tuberculous blood a caseous blastema is exuded, differing from the ordinary healthy blastema. Its caseous quality renders it unfit to nourish the tissues, and gives it a tendency to solidification.

Another large class of medical chemists think that tubercle is essentially *albuminous* in its nature. Thus HECHT found in crude tubercle: Fibrine 30 parts; Albumen 23; Gelatine 27; water and loss, 27. BOUDET found: Caseine, Gelatine and a considerable quantity of Cholesterine; when tuberculous substance was treated with cold water it yielded: Albumen, a substance resembling Caseine, and a fibrinous residue. GÜTERBOCK found: Pyine, Phymatine, Albumen and fat. SCHARLAU, Albumen, Gelatine, Fibrine, fat and water. VOGEL, Fibrine, Albumen and Caseine, with fat, a material analagous to Pyine, &c. GLOVER, Pyine, Albumen, (but no Caseine,) fat, &c. L'HERETIER found softened tubercle to consist of Albumen, very soft Fibrine, fatty matter and lime.

It is easy to account for many of these discrepancies; thus PREUSS in the most complete chemical analyses of crude tubercular pulmonary substance which has yet been furnished, found Gelatine in the residue of the pulmonary tissue, which he carefully separated from the tuberculous substance, but none in tubercle itself. If other chemists had been equally careful, they probably would not have found much or any Gelatine in

tuberculous matter. Again, ANCELL says that Pyine is by no means a constant constituent of tubercle; it is a trit-oxide of Protein, the result of inflammatory action on tuberculous blood resulting in the super-oxidation of the Protein compounds, such as Caseine, or possibly Albumen or Fibrine, which make up the bulk of tubercle. The Fibrine is also probably the result of inflammation, hence, we can easily narrow down the two essential constituents of tubercle to Caseine and Albumen.

Caseine and Albumen are analagous substances; both are compounds of Protein; Albumen consists of 10 atoms of Protein, 2 atoms of Sulphur and 1 of Phosphor.; while Caseine consists of 10 atoms of Protein, 1 of Sulphur and none of Phosphor. Hence it is very easy for careless or not very expert chemists to mistake one for the other.

TUBERCULOUS BLOOD.

As tubercle is evidently derived from the blood, we have next to examine the character of the blood in tuberculous subjects. According to ANCELL tuberculous blood is defective in vital properties; the red globules are *deficient* in number and defective in structure; the globulin, hæmatin and iron are all *deficient*.

The *serum* of the blood is vitiated in quality, the water, Albumen and lime are in *excess*, and the Albumen also defective in quality. Caseine does not exist normally in the blood, and hence the defect in the Albumen may consist in its tendency to be converted into Caseine.

The Fibrine is rather deficient in quantity and defective in quality, the fats probably deficient; the alkaline and earthy salts, especially the chlorides and phosphates of Soda and Potassa decidedly deficient.

DIETETIC TREATMENT OF THE TUBERCULOUS DYSCRASIA.

Hence the indications for the improvement of the quality of tuberculous blood, are: 1st, to increase the quantity of iron, fat, alkaline- and earthy-salts and Fibrine, and to improve the quality of the latter; 2d, to diminish the quantity of water, lime and Albumen, and improve the quality of the latter.

As blood is formed from the food by the processes of digestion, chymification, chylification and sanguinification, tuberculous blood may be produced from improper food, by a peculiar form of indigestion, or by a defect in sanguinification in the lungs or other parts of the body.

In the first place vegetable Albumen, according to MULDER is perfectly identical with animal Albumen, and hence it is probable that the whole quantity of Albumen required for the purposes of the body is delivered to it already formed, and does not require to be elaborated by the processes of digestion or sanguinification. Great care should be exercised in the selection of the albuminous articles of food for consumptive persons, that they be of the best quality; as there is already a tendency to excess of Albumen in tuberculous subjects, articles of food should be selected which contain comparatively little of already formed Albumen. According to PROUT the following quantities of Albumen are found in the subjoined animal substances.

East India Isinglass, - -	7.2 to 13.5 per cent.
White of Egg, - - - -	15.5 "
Yolk " - - - - -	17.47 "
Liver of Ox, - - - -	20.19 "
Sweetbread, - - - -	14.00 "
Caviare, - - - - -	31.00 "

Hence the above articles are more or less objectionable in the diet of scrofulous, tuberculous or consumptive persons.

The muscle of	Beef contains only,	-	2.2 per cent.
"	Mutton "	-	2.6 "
"	Venison "	-	2.3 "
"	Veal "	2.6 to	3.2 "
"	Chicken "	-	3.0 "
"	Fish "	4.4 to	5.2 "
"	Pigeon "	-	4.5 "

Hence, beef, mutton, venison and chicken form the best animal food for tuberculous subjects.

Again, as the Fibrine of the blood is defective and deficient, articles of food which contain much Fibrine should be selected.

The muscle of	Beef contains	20	per cent. of	Fibrine.
"	Mutton "	22	"	"
"	Chicken "	20	"	"

The muscle of	Veal	contains	19	per cent. of	Fibrine.
"	Pork	"	19	"	"
"	Fish	"	from 13 to 15	"	"
"	Sweetbread,	only	8	"	"

Again, articles which contain Caseine should be avoided in the diet of tuberculous persons—milk, curds and cheese are objectionable, cream and whey are allowable. Asses' milk is the least objectionable as it contains only 1.82 per cent. of Caseine, while cows' milk contains as much as 4.48. The milk of cows fed on hay, turnips and potatoes contains only 3.3 per cent. of Caseine, and is perhaps less injurious than some other kinds.

Vegetable Caseine is chiefly found in the leguminous seeds, such as beans, peas, lentils, &c., hence these may have to be avoided.

Vegetable Albumen is present in considerable quantity in most vegetable juices, such as the juices of carrots, turnips, cabbages, cauliflowers, asparagus, &c.—Potatoes contain far less Protein and Albumen than any other vegetable substance used for food,—only 1 per cent.

Vegetable Fibrine is most abundant in the seeds of the cereal grasses, such as wheat, rye, barley, oats, maize, rice; it also exists in buckwheat; the juice of grapes is especially rich in it, &c.

As the fat is deficient in the tuberculous dyscrasia, the oily alimentary principles should be used.

Filberts contain		60	per cent. of	oil.
Walnuts "		50	"	"
Olive seeds		54	"	"
Cocoa and Earth-nuts		47	"	"
Almonds "		46	"	"
Maize "		9	"	"
Dates "	only	.02	"	"
Yolk of Eggs		28.75	"	"
Ordinary meat, with cellular tissue		14.3	"	"
Liver of Ox	only	3.89	"	"
Caviare	"	4.3	"	"
Cow's Milk	"	3.13	"	"
Asses "	"	.11	"	"

Butter and olive oil, fats, meats and marrow may be used, suet puddings, salmon, herrings and eels abound in oil, chocolate and cocoa, hashes, stews and broths contain much fat. As the fixed oils and fats are difficult and slow of digestion many physicians may consider them objectionable. It is well known that in many delicate persons fat does not become properly chymified. It floats on the contents of the stomach in the form of an oily pellicle, becoming odorous, and sometimes highly rancid, and in this state excites heartburn, most disagreeable nausea, and eructations, or at times actual vomiting. These effects are owing to the development of volatile fatty acids, and may be prevented by the use of alkaline and earthy salts, such as the chlorides and phosphates of Soda and Potassa which are also required to make up the deficiency of them, which has been shown to be present in the blood of tuberculous subjects.

As the *Iron* of the blood is also deficient, a certain quantity must be supplied to the system.

TUBERCULOUS INDIGESTION.

Such is the theoretically correct system of diet in tuberculous dyscrasia and affections; but it is very evident that healthy animal or vegetable Caseine or Albumen will not be converted into tuberculous Caseine and Albumen if all the functions of digestion and sanguinification be perfectly and healthily performed. According to BENNETT, many observing physicians have not failed to notice that tubercular disease is ushered in with a bad or capricious appetite, a furred or morbidly clean tongue, *unusual acidity of the stomach* and bowels, loss of appetite, constipation alternating with diarrhœa, and a variety of symptoms denominated dyspeptic, or referable to a deranged state of the digestive organs. It is probable that tuberculosis is a disease of the primary digestion, causing, 1st, impoverishment of the blood; 2d, local exudations from the bloodvessels presenting the characters of tuberculous exudation; and third the consequent softening, ulcerations and destructive results which distinguish it. BENNETT also asserts that further observations show, that circumstances which remove the malassimilation of food frequently check further tubercular exuda-

tions, while those which previously existed become abortive, and that occasionally more extensive excavations may heal up and cicatrize.

A healthy nutrition of the body cannot proceed without a proper admixture and proportion of the albuminous and oleaginous elements. This may be inferred from the physiological experiments of TIEDEMANN, GMELIN, LEURET, LASSAIGNE, MAGENDIE and others; from an observation of the constituents of milk, (caseine, butter and sugar,) the natural food of young mammiferous animals; from a knowledge of the contents of the egg, (albumen and oil,) which constitute the source from which all the tissues of oviparous animals are formed before the shell is broken; and from all that we know of the principles contained in the food of adult animals.

The peculiarity of tuberculosis, however, is that an excess of acidity exists in the alimentary canal, whereby the albuminous constituents of the food are rendered easily soluble, whilst the alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable either of transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system, as will render them easily assimilable. In consequence, more albuminous than fatty matters enter the blood, and the necessary waste of structure is supplied by the absorption of the adipose tissues of the body. Hence the emaciation which characterizes tubercular disease; hence also, as the fatty matters introduced into the stomach are not digested and assimilated, but are simply taken up into the vena porta and carried to the liver, the fatty liver which occurs so frequently in the tuberculous dyscrasia. In the meanwhile local congestions occur in various parts, leading to an exudation containing a super-abundance of albumen; which in its turn being deficient in the necessary proportion of fatty matter to form elementary molecules, remain abortive and form tuberculous corpuscules.

To improve the faulty nutrition which originates and keeps up the tubercular disease it is of all things important, therefore, to cause a larger quantity of fatty matter to be assimilated. The use of alkalies or other solvents or digestives of oil are all-important, although a mere increase in the amount, or even

quality of the food will often accomplish this. The treatment practised some years ago by Dr. STEWART, which consisted in freely administering beef-steaks and porter, and causing exercise to be taken in the open air, excited considerable attention from its success. BENNETT has been informed, that in some parts of America the cure consists in living on the bone-marrow of the buffalo, and that the consumptive patient gets so strong in this way, that he is at length able to hunt down the animal on the prairies. All kinds of food, rich in fat, will not unfrequently produce the same effects, and hence the value long attributed to milk, especially ass's milk, the produce of the dairy, as cream and butter, fat bacon, caviare, &c.

But, in order that such substances should be digested or assimilated, solvents of fat (alkalies) must be used, if the powers of the stomach and alimentary canal have undergone any great diminution. Unless this precaution be used, it will be found in many cases that the patient is unable to tolerate such kind of food, and that it either lies undigested in the stomach, or is sooner or later vomited.

Children born of tuberculous mothers should be weaned early; unless a perfectly healthy and robust wet-nurse can be procured it is better to feed them with diluted or undiluted cream.

FULLY DEVELOPED TUBERCULOUS MENINGITIS

Is marked by three important symptoms, viz.: by *headache*, *vomiting* and *constipation*, to which is added in the great majority of cases, some acceleration of the pulse; the intelligence may remain perfect, showing that the brain itself is not yet involved; the strength may not be greatly diminished, nor the appetite entirely lost, and the thirst may be moderate. These symptoms usually last but two or three days before others make their appearance, showing that the attack is confirmed. In some few instances, however, the precursory symptoms last, with irregular intermissions, for several weeks. In some cases the invasion may be preceded for three months by occasional cough, irregular attacks of fever, progressive emaciation, paleness, languor alternating with extreme irritability,

disinclination to take exercise, and during the latter part of the time by partial lameness, and in fact by all the signs of general tubercular disease. In other cases the invasion may be preceded for several months by frequent complaints of intense headache, especially after taking active exercise, and by unusual languor, and by no other symptoms; there may be long intervals of health, and the child then be taken down suddenly.

According to MEIGS, *headache* is a nearly invariable symptom in children old enough to describe their sensations, and is therefore very important. In infants its presence is to be inferred when the child frequently carries its hands to various parts of the head, and presses strongly against it, and when the head is constantly rolled from side to side. It is usually referred to a point just over one or both brows; in other cases it extends over the whole head. It is commonly severe so that the child, when old enough, complains of it spontaneously; they may even cry frequently and bitterly, beg to have the doctor sent for, and submit willingly to any remedy suggested for its relief. It is thought that the acute, shrill cry of the disease depends upon the acuteness of this pain. It usually lasts throughout the first stage, and ceases only as the delirium and coma of the second stage come on.

As long as the membranes of the brain are alone involved the headache is not attended with delirium. In truth, the intellectual faculties remain undisturbed in the majority of cases during the first few days; and this fact, which is so contrary to what is generally supposed, is apt to mislead the physician in his opinion and treatment of the case; he is generally too apt to give remedies which act more specifically upon the brain, than upon its membranes.

I trust that it has been rendered evident that a correct system of diet is as necessary in tuberculosis as in diabetes or adiposis. There is frequently time sufficient to make the trial, for the healthy and robust are comparatively seldom attacked by dropsy of the brain, and in many instances the evidences of declining health, precede for weeks or months the real premonitory symptoms of the disease. We often observe a gradual decay of the child's strength and wasting of its flesh, it becomes subject to irregular febrile attacks, coughs a little, loses its

appetite, its bowels are almost always disordered, and generally constipated, it makes frequent vague complaints of pains in its limbs, or of weariness or headache.

Medical treatment.—HARTMANN correctly states that one of the most homœopathic remedies for the precursory stage of tubercular meningitis is *Pulsatilla;* it corresponds more especially to the derangement of the stomach, to the inability to digest rich and fatty food, to the gradually failing health, loss of flesh and ill-conditioned look, to the tottering gait, the vertigo, and deranged secretion of urine, to the headache, nausea and vomiting. Still it is not positively known to have a specific curative relation to the albuminous or tuberculous dyscrasia.

Hepar-sulphur. deserves great attention when the albuminous excess, or dyscrasia is fully developed, at least, according to SOBERNHEIM it renders the pulse softer and slower, the blood darker and *decidedly deficient in albumen;* its powers in this respect are so decided that HARTWIG asserts, in half an hour after taking Hepar-sulph. in massive doses, the blood of horses will be found from three-fourths to four-fifths deficient in albumen. When small doses fail, the following prescription may be used:

Hepar-sulphuris,	grs.	18.
Cocoa Butter,	drachms	2.
White Sugar,	"	3.
Oil of Almonds,	ounce	½.

One or more tea-spoonsful per dose.

This prescription will meet many of the requirements in the tuberculous dyscrasia, viz.: the alkaline, oleaginous and anti-albuminous treatment. BUSCH of Strasburg, has cured several cases of confirmed tubercular consumption, with Aconite in the first stage, and Hepar-sulphuris in the subsequent periods. Prof. BANG, of Copenhagen, has had similar good fortune; also Dr. HAREL DE TANCREL.

Treatment of the headache.—If fever and other symptoms of inflammation be present, *Aconite* will be the most important remedy. It may be given internally in the usual doses; besides, as the seat of the disease is at the base of the brain, Aconitine ointment, (from 1 to 4 grains to the half ounce of

simple cerate,) may be rubbed behind and below the ears, and on the back of the neck where it joins the head; or Tincture of the Root may be applied freely in the same localities, every two, four or six hours, according to the severity of the symptoms. In simple acute meningitis these remedies should be applied to the top of the head.

The next most important remedy is *Belladonna* or *Stramonium;* they may be given internally; and the Extracts or Tinctures may be used externally, as directed for Aconite.

If these fail to afford relief, Hyosciamus or Opium may be used both internally and externally; as soon as the physician is decided in his opinion that the case is one of Tubercular Meningitis, and hence almost necessarily hopeless, his principal endeavors should be directed towards soothing the sufferings of the patient.

But *Glonoine* should be tried faithfully before palliative remedies are given; especially when there is violent congestion to the head, throbbing in the forehead, temples and vertex, violent beating of the carotids, redness of the face, quickness of the pulse, &c.

Vomiting is the next most important diagnostic symptom, and almost a constant one; BARRIER found it absent in only 15 cases out of 80, or in less than a fifth. It generally makes its appearance on the first day, rarely later than the second or third, and lasts two or three days, and sometimes longer; it may, however, last ten or twelve days; the matters ejected consist of food, mucus and bile in various proportions; it is commonly repeated two or three times a day. The vomiting is often, although not always, of a peculiar character, viz.: projectile, i. e. it occurs without much or any nausea, and the contents of the stomach are propelled suddenly with great force, often to the distance of several feet from the person of the patient. The vomiting may arise from irritation of the Pneumogastric nerve at the base of the brain; or from commencing disease in the Corpus-striatum, (see treatise on headaches, p. xiv.); or from gelatinous softening of the stomach.

Treatment of the vomiting.—This may subside under the use of Aconite or Belladonna. If these fail, *Cuprum* or *Zin-*

cum are best suited to the peculiar spasmodic vomiting, attended with little nausea. Zincum is also supposed to exert a specific action on the brain, (see treatise on Mental Derangement, p. xxiv.) and HARTMANN says it is very useful in the first stages of the disease, when the children become irritable in the evening, are somewhat delirious during their sleep, but become more quiet after midnight, and are quite bright again towards morning; also when the bowels are costive, violent headache sets in, the eyes become sensitive to light, the nose dry, retching, vomiting and insatiable appetite occur, the urine becomes scanty, turbid and loam-colored, with evening fever, frequent pulse, heat and anxiety, and twitchings of the muscles. Zinc has also a well-established reputation against many subacute and chronic inflammations, many nervous and spasmodic affections, such as asthma, St. Vitus' dance, epilepsy, convulsions of children, constipation, flatulence, &c.

In vomiting from softening of the stomach, *Kreosote* is the best remedy.

Constipation is said to be even a more important symptom than vomiting; according to BARRIER it is absent in only 7 cases out of 87; it generally persists obstinately for several days; and sometimes is not present at the very beginning of the disease, but sets in soon afterwards. It generally depends upon the disease at the base of the brain, more especially seated in the Corpora-quadrigemina, (see treatise on headaches, p. xiv.)

Treatment.—In children predisposed to dropsy of the brain, the condition of the bowels must be most carefully watched, constipation must not be allowed to exist even for a day, and the least indication of gastric disorder must be regarded as a serious matter. If constipation has already been present for several days before the physician is called in, some simple but efficient purgative or injective medicine should be given at once. When this has been done, Zincum and Opium will probably keep them regular; at least Dr. STRONG, (allopathic physician) ably advocates the use of Zinc and Opium in flatulence, and in constipation. WEST thinks that the value of purgatives in the treatment of ordinary hydrocephalus can scarcely be overrated; but he says that they must be given so as not merely to obtain free action of the bowels, but to maintain it for some days. In

tubercular meningitis any very harsh and active measures for this purpose are entirely misplaced and useless.

The *urine* is scanty, frequently turbid and cloudy in the first stage; afterwards it may deposit a chalk-like sediment, and finally it is passed involuntarily. Other authors say that it is apt to be of a deep amber hue, of high specific gravity, sometimes milky depositing a slimy sediment, and it is apt to smell offensively after being passed and to cause pain in the urethra. In simple meningitis or phrenitis, the urine is of a dark-brown or porter-color, containing an excess of urea and less of lithates; the sediment is generally reddish or reddish-brown.

Again hydrocephalus has been known to commence and proceed to the last stage with scarcely any other symptom than slight fever, with little or no pain in the head, but a constant and nearly ineffectual desire to pass urine; in one case not above a gill of urine was passed in twenty-four hours for five days, and no other symptom of consequence was present. MONRO and EBERLEE have observed such cases.

On the other hand GUERSENT observed five cases in which the profuse secretion of urine was quite remarkable, and in these tubercles were found in the kidneys in every case.

Treatment of the urinary disorder.—Many physicians think that the peculiar milky urine, with chalk-like or slimy sediment indicate an endeavor on the part of nature to drain off some noxious substance from the blood: if this be the case, *Phosphoric-acid* will prove the most homœopathic remedy to milky urine, with gelatinous lumps, or appearing as if flour were stirred in it. This remedy is also indicated against softening of the stomach.

Carbo-vegetabilis, and *Iodine* when the urine is thick and milky.

Chin.-sulph., when there are slimy flocculi, and a clay-colored greasy sediment.

Tart.-emet., when it is pale, with a flour-like sediment.

Rhus-tox., pale urine with a snow-white sediment.

Zincum, when it is turbid and clay-colored.

Muriatic-acid, when it is white and turbid like milk when passed.

China, when it is white and turbid, with a white sediment.

Graphite, when it is turbid, with a white sediment.

Dulcamara, when it is turbid and white.

Mercurius, when it is turbid as if stirred with flour; or clear at first, and then becomes white as if mixed with chalk, with burning in the urethra.

Zincum, yellow urine, depositing whitish flocculi.

Some physicians think it very important that there should be a free flow of urine, and erroneously suppose that the brain is safe as long as the kidneys act freely, (see above).

Among the brain remedies, Belladonna produces a free flow of urine. Dr. H. M. Gray thinks that it exerts a tremendous diuretic power; is confident that its power over the secretion of urine is very great, as he passed three pints of urine in the course of an hour, attended with slight strangury, while under its influence.

Cantharides is perhaps the most homœopathic remedy to meningitis, and its action upon the kidneys is well-known; it is most indicated when the urine is full of mucus, with flocculi and filaments, or mixed with sand or clots of blood.

Arnica, when clear urine soon becomes white and turbid.

Zincum has already been alluded to.

If these remedies fail Digitalis and hydrodate of Potash will almost certainly produce a free flow of urine, but that will very often not ward off a fatal termination.

The next most important symptoms are observed in the *pulse* and *respiration;* they do not accord; the pulse is apt to be rapid at first and the respiration disproportionably slow; irregularity of breathing is often noticed by an attentive observer, long before there is any irregularity of the pulse; one, two or three respirations may be taken at equal intervals, but the breathing is apt to be quite superficial, the upper ribs only slightly rising and falling, but then there comes a full deep inspiration, very often attended with a sigh: again, there are one, two, three or four, superficial inspirations followed by a deep loud one. At other times the inspiration is quick, hurried and convulsive, followed by a marked increase in the duration of expiration and the period of repose; the inspiration is considerably shortened and a deep prolonged sighing often supervenes,

and considerably diminishes the amount of respiratory movements.

In the *first* stage the pulse is much accelerated, full but compressible, with a perceptible variation in the rythm of the artery, and in the regularity of the strokes; the pulse sometimes beating as quick during one-third of a given time as it had previously done during the former two-thirds; thus, in a pulse of 140, one-half, or 70 strokes may be performed in 40 seconds, and the other 70 in 20 seconds. This is often noticed before there is any intermittence noticed. Then some slight intermission will be noticed every 7th, 17th or 20th stroke; finally the pulse will begin to change its character, one or two strokes in quick succession being soft, weak and fluttering.

In the *second* stage the pulse becomes slow, labored, intermitting and irregular, but is easily quickened by motion or mental disturbance to double its previous amount of pulsations. If the pulse beat only 60, 80 or 90 per minute, we may be certain that life will last for some days; but as soon as a new acceleration ensues, death will occur in two or three, or at most in five or six days. In the second quickening of the pulse it generally rises to 112 or 120 on the first day, and will be from 140 to 160 on the very day of death, it increases in frequency up to death.

The pulse always begins to become slow after the headache and vomiting have lasted sometime, and before somnolency sets in; it falls from 120 or 140, to 80 or even as low as 54.

These alterations in the breathing and pulsations are doubtless produced by irritation, followed by pressure upon the par-vagum at the base of the brain.

Treatment.—Mercurius-corrosivus is indicated when the breathing is difficult and irregular.

Belladonna, when the respiration is natural at times, at others almost extinct; also when it is labored, irregular, sometimes hurried, at others slow.

Opium, when the inspirations are slow, long or sighing; or the breathing is irregular and suffocative; or deep and strong, followed by difficult and feeble breaths.

Stramonium, when the inspirations are slow, followed by sudden expirations, with frequent sighing.

Camphor, when the breathing is slow and deep.

Laurocerasus and *Hydrocyanic-acid*, when it is slow, moaning and rattling.

Iodine and *Spongia*, when it is slow and deep, as after exhaustion.

Aconite, when it is slow during sleep.

Nitric-acid, when slow and feeble, with wheezing.

Scilla, when it is slow and heavy.

Lobelia-inflata, when there is an inclination to sigh.

As regards the *Pulse:*

Belladonna is indicated when it is quick and strong, or slow and full.

Aconite, when it is slow irregular and intermitting.

Opium, when slow and full, afterwards becoming weak.

Stramonium, when irregular, frequent, quick; intermittent, tremulous and weak.

Laurocerasus, when irregular, slow, down to 30.

Digitalis, when irregular and small; irregular and unequal, or slow; very slow, down to 35 or 40; intermitting and slow.

Agaricus, when it is unequal, slow, feeble and intermitting.

Hyosciamus, irregular and weak; intermittent, small and quick; falling from 80 to 59.

Cuprum, irregular, small and contracted.

Conium, unequal in strength and quickness.

Secale, irregular, at times slow and full, then small and contracted; intermittent, slow and small.

Tartar-emetic, irregular and weak; slow, down to 50.

Tobacco, slow, small and intermitting; down to 45, and very weak.

Mercurius, irregular and small; feeble, slow and tremulous.

Plumbum, irregular, first quick, then slow; sluggish and intermittent.

Phos. and *Nitric-acid*, irregular and intermittent.

Muriatic-acid, intermitting every 3d beat.

Hellebore, slow and very small.

Cough.—A slight false cough which partly resembles a suppressed effort to vomit, and not unlike the morning liver cough

of drunkards, is not unfrequent in all three stages. When it occurs in conjunction with the peculiar breathing before described, it is supposed to be a sign of effusion in the ventricles. It may depend upon irritation of the pneumo-gastric nerve at the base of the brain; or upon the deposit of miliary tubercles.

Treatment.—It is stated that nothing will relieve it; but Conium is often a useful remedy.

Retraction of the abdomen is a valuable diagnostic sign; it usually occurs about the sixth day; the belly becomes depressed at its centre and takes on the form of a boat; it is almost a constant symptom, and does not arise from the constipation, as it is equally present when diarrhœa sets in; it is almost peculiar to this disease of the brain.

Treatment.—Plumbum and Zincum are the most homœopathic remedies, although Nux, Ignatia, Angustura, Alumina and Colocynth may seem to be indicated.

I have been in the habit of placing great stress upon the presence of *stiff neck*, occurring every afternoon or evening, and disappearing in the morning. It probably arises from irritation at the base of the brain, near the origin of the twelfth pair of nerves, as this supplies the muscles of the nape of the neck and shoulders. If this symptom occur in a person born of tuberculous or consumptive parents, and is attended with headache, fever, vomiting, constipation and signs of irritation of the brain, it always excites our liveliest apprehensions as to the result.

Treatment.—Zincum and Plumbum are the best remedies.

The *precursory* stage above alluded to is of variable duration, but on the average does not exceed four or five days. When the second stage sets in, the nature of the affection becomes very apparent. The child no longer has intervals of cheerfulness, nor attempts to sit up, but wishes to be left quiet in bed, and the face assumes a permanent expression of anxiety and suffering. The eyes are often kept closed, and the eyelids are knit, the child endeavoring to shut out the light from its morbidly sensitive retina. The skin continues dry, the face is sometimes flushed, and the head often hot; and though these two symptoms vary much in their duration, coming and going without

any evident cause, yet there is a permanently increased pulsation of the carotids, and if the skull be not ossified, the brain may be seen and felt forcibly beating through the anterior fontanelle. The child is now very averse to being disturbed, and often lies in a drowsy condition, unless spoken to; when old enough to answer, it usually complains of its head, or of weariness or sleepiness. Its replies are generally rational but short; and if it needs anything, it asks in as few words as possible, in a quick, pettish manner, and shows much irritability, if not at once attended to. At other times it lies with its face turned from the light, either quite quiet, or moaning in a low tone of voice, and now and then uttering a short, sharp, lamentable cry, which is regarded as characteristic of the disease, and hence termed the *cry hydrencephalique*. To this, however, there are exceptions, and children sometimes scream out with the intensity of the pain. As night comes on, there is almost always a distinct exacerbation of the symptoms, and the quiet of the day is frequently succeeded by a noisy and excited state, in which vociferous cries about the head alternate with delirium. At times, however, an increase of restlessness is the only difference from the state of stupor in which the child lay during the day. At the commencement of this stage the pulse is quickened, sometimes very much so. The child sometimes keeps its eyes so firmly closed that we can scarcely see the state of its pupils. Usually they are not much affected, but sometimes one is more dilated and acts more sluggishly than the other; or, in other cases squinting exists, though perhaps in a very slight degree, or confined to one eye. It is seldom that vomiting continues beyond the commencement of this stage, but its cessation is not followed by any desire either for food or drink. The bowels usually become even more constipated than they were before, and the evacuations continue quite as unnatural, while all flatus disappears from the intestines, and the abdomen thus acquires that shrunken form on which much stress has been laid by some writers, as characteristic of dropsy of the brain.—West.

Treatment.—In this stage Mercury and purgatives are generally given freely and barbarously by allopathic physicians. But the most efficient allopathic remedies are a few small doses of Mercury or Proto-iodide of Mercury, followed by Hydriodate

of Potash internally, aided by the free and frequent application of Hydriodate of Potash ointment over the whole of the head, and back of the neck. In desperate cases Dr. HAHN has several times succeeded in arousing the child with the cold effusion, after the supervention of complete coma. Friction of the scalp with Tartar-emetic ointment, repeated every two hours until pustulation was established, enabled Dr. HAHN to save fourteen cases, when in an apparently hopeless state of coma; even in tuberculous meningitis cures were obtained in several cases by the Tartar-emetic frictions under the most unpromising circumstances.

The *third* stage commences when the brain itself becomes involved and becomes softened. The transition is sometimes effected very gradually by the deepening of the state of drowsiness, till it amounts to a stupor, from which it is impossible to arouse the child. At other times, the stupor comes on very suddenly, immediately after an attack of convulsions. These convulsions usually affect one side much more than the other, and after the fit has passed off, one side is generally found partially or completely paralyzed, while the child makes constant automatic movements with the other, carrying the hand to the head, and alternately flexing and extending the leg. The side which is the most affected during the fit, is generally, though not invariably the most palsied afterwards. When the third stage is fully established, the child lies upon its back in a state of complete insensibility, with one leg stretched out, the other drawn up towards the abdomen. The tremulous hands are either employed in picking the lips or nose until the blood comes, or one hand is kept on the genitals, while the other is rubbing the face or head. The head is at one moment hot, and the face flushed, and then the heat disappears and the flush fades, though usually there is an increase of heat about the back of the head. Sometimes the skin will be dry, at others though the extremities are cold, a profuse sweat will break out on some part of the body, or on the head. The pulse becomes regular again, but grows smaller and more rapid until it can only be counted at the heart. The eyelids close only partially; there is some squinting; light is no longer unpleasant, for the dilated pupils are motionless. The child now often makes auto-

matic movements with the mouth as if chewing, or as though endeavoring to swallow something, and it generally happens, that although sensibility is quite extinguished, the little patient will still swallow anything that is put into its mouth, and the power of deglutition is in most cases one of the very last to be abolished.—West.

Many of these symptoms are sometimes very stupidly regarded as signs of worm disease, and Cina and Spigelia or other worm remedies are administered. But these are signs of softening of the brain, and cannot be removed by any remedies, although Zincum, Plumbum, Nux and Arsenicum are the most appropriate medicines.

An attack of convulsions now sometimes puts an end to the painful scene; but often the child lives on for days, though wasted to a skeleton, and its features so changed by suffering that those persons who had seen it but a short time before would now scarcely recognize it. The head often becomes retracted, and the child bores the back of its head into the pillow; the eyelids are wide open, and the eyes are turned upwards, so as to conceal three-fourths of the iris beneath the upper lid, while the countenance is still further disfigured by a horrible squint, or by a constant rolling of the eyes. The pupils are now fixed and glassy, the white of the eye is extremely bloodshot, and their surface besmeared with a copious secretion from the meibomian glands, which collects in their corners. One arm and leg are stiff and motionless; the other in constant spasmodic movement, while the hands are often clenched, and the wrists bent upon the forearm. Subsultus and spasmodic twitchings of the face are common. Cold clammy sweats break out, the breathing is labored, swallowing becomes difficult, and the child almost chokes with the effort to swallow, or lets the fluid run out at the corners of the mouth. It is uncertain how long this condition may endure; sometimes many days will pass, during which death is hourly expected and earnestly prayed for, to put an end to the patient's sufferings.

Treatment.—In this stage, palliatives only should be used, such as Opium, Conium, Hyosciamus, Cannabis-indica, Chloroform, Ether, &c. In some instances I have applied anodyne fomentations to the head, and used anodyne inhalations after the little patient was unable to swallow.

TUBERCULOUS MENINGITIS.

IN YOUTHS AND ADULTS.

Dr. KENNEDY, of Dublin, has seen about 30 cases in the course of nine years; and thinks that it is more common in females than males, in the proportion of 2 to 1. Of 80 cases of tubercular meningitis observed by GUERSENT, 33 were over 15 years of age; and of 12 cases by JACKSON, 7 were adults. Of 10 cases, 6 were in females, aged 27, 20, 28, 28, 26 and 23 respectively; and 4 in males, aged 22, 20, 21 and 24.

According to KENNEDY, in the majority of cases the disease commences with the symptoms of a mild, continued or remittent fever, which goes on without change for 10, 12 or 14 days. It occasionally begins by a distinct complaint of the head, the patient still being able to go about.

When it commences with fever, the symptoms are usually very mild; there is some quickness of the pulse, heat of skin, furred tongue and headache. The case seems to go on favorably, remedies seem to avail, and the patient may even be pronounced convalescent; or the symptoms may become so slight that the tongue is scarcely furred, some appetite may be present, and the patient may sleep well at night.

When the disease commences by fever, the first sign of anything going wrong commonly takes place at night; a marked increase of fever may then be observed, the tongue becomes more furred, the skin feverish and the pulse rises to near 100. KENNEDY has sometimes been led to suspect the serious nature of the case, by the nurse casually stating that on the previous night the patient had not slept so well, had talked in her sleep, or awakened with a scream; these symptoms may return for four or five nights in succession, and yet the patient seem comparatively well during the day.

Alterations in the movements or expression of the eye, are often among the earliest signs, pointing to coming trouble. Squinting may occur, and yet be so slight as to be doubted or disputed, or it may be intermitting, i. e., present at one moment and absent the next; or else it only occurs when the patient is left to herself, but disappearing the moment she is spoken to;

these slight changes may occur in one or both eyes, and are better observed at a little distance. One eyeball may be almost immovable, and yet it is easy to overlook this; or one pupil may be somewhat larger than the other; neither are dilated, but they differ in size. Sometimes the eyelids have a tendency to droop, and this ptosis may be most marked in one eye. These eye symptoms are among the most constant and important signs.

At times the first symptom is vomiting, occurring most frequently in the morning; it may happen one or more times, but never takes the prominent part it does in the hydrocephalus of childhood.

The head is now more apt to be complained of; perhaps there may be pain, only when the patient coughs; as a rule it is referred to the forehead over the eyes, but sometimes extends to the whole head.

This state may continue for four or five days when the symptoms will become more serious; the patient is apt to wander a little while awake, generally towards evening, but only momentarily, as she is quite herself again when spoken to. The countenance is also apt to become heavy, as if she were inclined to doze.

The next sign which attracts attention is the pulse; in the course of 24 hours it may fall remarkably, viz.: from 100 or 108 to 60, 55 or even 48. After the lapse of 48 hours more it begins to rise again, often getting up to 130 or 140, and now the case progresses rapidly; the patient becomes obtuse, difficult to rouse, and the signs of confirmed dropsy of the brain are soon added.

In the advanced stages it is very common to find the patient's hand applied to the head, and the brows strongly knit, even in sleep. In some cases the patient will sing the same tune all night, or may grit her teeth with a degree of violence almost insupportable. The entire duration of these cases is about three weeks; the disease seems to run in families, several members, young and adult being affected; three-fourths of the patients have naturally a heavy aspect; their faces are apt to be large in proportion to their heads, the lips to be large, and the skin rather coarse. In fact if a mild remittent fever occur in a

young person, especially in a girl about fifteen years old, born of scrofulous or consumptive parents, and slight brain symptoms show themselves, be upon your guard.

Treatment.—See Tuberculous Meningitis of Children.

HYDROCEPHALOID DISEASE

This is a most frequent and often fatal affection, though if rightly treated it is a very manageable one. It is especially common in this country, where infantile diarrhœa and summer-complaint occur frequently and severely, and blood-letting and other reducing treatment are resorted to so commonly, quickly producing that state of general exhaustion which leads to a train of symptoms about the head, closely resembling those of dropsy of the brain. According to West, hydrocephaloid disease is that condition which is induced when the brain is somewhat suddenly deprived of its usual supply of blood. Even in the adult a profuse loss of blood is often followed by an extremely severe headache, and by various other brain-symptoms; while in the child, whose brain needs a proportionably larger quantity of blood for the due performance of its functions, the symptoms that follow its excessive loss are of a corresponding gravity; often indeed they present a striking similarity to those which betoken inflammation, or dropsy of the brain. Marshall Hall even says that in young children, bleeding, purging and giving calomel enough, in any disease, will bring it on.

Again, there is no disorder in which the two conditions of considerable sympathetic disturbance of the brain, coupled with rapid exhaustion of the vital power, are so completely fulfilled as in infantile diarrhœa, and summer-complaint, and in no other affections do we meet with such frequent or such well-marked instances of the supervention of the hydrocephaloid disease.

Symptoms.—This affection may be divided into two stages: the first, that of irritability; the second, that of torpor. These two stages resemble in many of their symptoms the first and second stages of dropsy of the brain.

In the first stage the infant becomes restless, irritable and *feverish;* the face is flushed, the surface hot, and the pulse frequent; there is an undue sensitiveness of the nerves of feel-

ing, and the little patient starts on being touched, or from any sudden noise; there are sighing and moaning during sleep, and screaming; the bowels are apt to be flatulent and loose, and the evacuations are mucous and disordered.—M. Hall.

If the affection arises from the exhaustion caused by diarrhœa, and if from an erroneous notion as to the nature of this disease, nourishment and cordials be not given, or if the diarrhœa be allowed to continue, or be kept up by medicines, the exhaustion which ensues is apt to lead to a different train of symptoms:

The *second* stage then sets in: the countenance becomes pale, and the cheeks cool or cold; the eyelids are half closed; the eyes are fixed, and unattracted by any object placed before them; the pupils unmoved on the approach of light; the breathing from being quick becomes irregular and sighing; the voice becomes husky, and there is sometimes a husky, teazing cough; and eventually, if the strength of the little patient continues to decline, there is a rattling in the breathing, and the feet become cold.

Again, according to West, under no circumstances are mistakes more easily committed, and never are their results more mischievous, than when primary and real congestion of the brain has been somewhat over-treated allopathically, and the consequent symptoms of exhaustion are supposed to be those of advancing disease of the brain. In such a case, however, it would usually be observed that great faintness had been induced by the profuse depletion, and that the quiet which succeeded it was that of exhaustion, as much as of mitigated suffering; the fontanelle sunk below the level of the bones of the skull, instead of being tense and pulsating; the cool surface, and the pulse presenting no other characters than those of frequency and feebleness, would all point to the real nature of the case. To deplete further under such circumstances would be to destroy the patient; food is needed, not physic; the sunken powers of life must be rallied, and as strength returns the functions of the brain will again go on harmoniously.

The early stages of inflammation of the lungs, are also often attended with so much sympathetic disturbance of the brain, as to throw the other symptoms into the back-ground. The child may vomit, refers all its sufferings to the head, and possibly have an attack of convulsions almost at the onset. The routine

allopathist will naturally assume the case to be one of congestion of the brain, and treat it accordingly with free local depletion; the next day the indications of disordered breathing are more apparent, and more leeches are applied to the chest. The urgency of the symptoms may be relieved by these means, or at least the child may seem to suffer less; but soon the restlessness of exhaustion comes on, and then follow the soporose condition and the apparent coma; if the antiphlogistic treatment is resumed to arrest this imaginary dropsy of the brain, the little patient will die.

Treatment.—A large number of cases of hydrocephaloid disease are not only caused, but absolutely killed by allopathic treatment, while a proportionately large number will die under purely homœopathic treatment: for as WEST truly says, food and stimulants are required, not medicine. Although the diagnosis of this affection is sometimes attended with difficulty, the rules for its prevention and cure are happily very simple. Bearing in mind the possible supervention of hydrocephaloid disease, an infant should never be kept from the breast, nor a young child put upon spare diet for several days without the most absolute necessity. Especial attention must be paid to the food of young children, if the disease from which they suffer be diarrhœa, or some other which interferes directly with their nutrition; if the child be given nothing more nutritious than barley-water in small quantities, because the irritability of the stomach which results from weakness, seems to be the indication of disease in the brain, the restlessness will before long alternate with coma, and the child will die either comatose, or in convulsions. The irritability of the stomach is best overcome by giving nourishment in extremely small quantities, as a desert-spoonful of ass's milk, or equal parts of milk and barley-water for an infant, or of strong veal tea, for an older child, given little by little, every half hour. If the exhaustion be very great, and a state analagous to stupor impending, a hot mustard bath is sometimes very serviceable in rousing the child, while, at the same time, a few drops of Spirits of Hartshorn, or 5 to 15 drops of Brandy may be given every few hours. It is desirable, however, to suspend the use of the more powerful direct stimulants as soon as it can safely be done, though a nutritious diet will be necessary for some time.—WEST.

WASTING OF THE BRAIN.—(ATROPHY.)

IN CHILDREN.

Smallness of the brain sometimes occurs in consequence of a premature closure of the sutures and fontanelles. Such cases are apt to be attended with frequently recurring convulsions; loss of taste, so that the child cannot distinguish between what is nice and what is nasty, swallowing all things with the same readiness; the body and limbs may seem well nourished and well formed, yet the patient cannot stand or use his limbs properly; the urine and fæces are apt to be passed involuntarily and unconsciously; and gradually every glimmering of understanding will disappear.

Treatment.—These cases are generally quite hopeless; Phosphoric-acid in full doses may do some good.

According to West those cases are of much higher practical importance in which the brain of the child wastes or grows smaller during long-continued ill-health. The scalp will usually be found pale, thin and bloodless, the fontanelles sunken, and the process of ossification of the skull unusually tardy; fluid will be found effused into the sac of the arachnoid and the subjacent pia-mater; the substance of the brain is pale and its texture firmer than usual.

The important point about such cases is, that brain symptoms and frequently recurring convulsions may be observed in a child whose brain is not absolutely diseased, but merely too feeble and too wasted to perform its functions.

Treatment.—In infants who have been exhausted and wasted by previous illness, the physician must not interpose too hastily with remedies directed against a supposed brain-disease, but pursue a tonic and nourishing plan of treatment. Iodide of Potash may be used internally and externally to remove the fluid effused, and may possibly have some effect upon the hardening of the brain, although *Plumbum* is the most homœopathic remedy.

Partial atrophy will be marked by symptoms most decided in particular parts, or on one or the other side of the body.

IN ADULTS.

According to Rokitansky this disease is also common in old age, and is within certain limits a natural process of shrinking or decay; it becomes, however, a pathological condition even in old age, if it proceed to a very great extent, and still more if it come on prematurely at an early period of life.

The *grey* substance of the brain is apt to become of a dirty, or rusty brown color, running into yeast yellow; its consistence may be natural or distinctly softer than usual. The *white* substance loses its clear color and becomes of a dirty white; it is denser too than natural, and is sometimes as tough as leather. The vacuum within the skull, produced by the shrinking of the brain, is filled up chiefly by a clear colorless serum; the vessels of the pia-mater become enlarged and varicose.

It leads to congestions of the brain, or *Hyperæmia ex-vacuo*, causing transient or protracted attacks which simulate apoplexy, and are so frequent in old age; or to actual apoplexy, with hæmorrhage within the brain; or to œdema of the brain.

Treatment.—Iodide of Baryta, Plumbum, and Iodide of Iron are the principal remedies.

ENLARGEMENT OF THE BRAIN.

HYPERTROPHY.

According to Rokitansky enlargement of the brain is sometimes congenital and is then often combined with dropsy of the brain; still it more usually comes on after birth, and is almost exclusively confined to the period of childhood. It is occasionally met with about the time of puberty, and sometimes, although exceedingly rarely, even in manhood.

It is the *white* substance of the brain which is increased in volume; it is always dazzling white, and remarkably pale and bloodless, showing that it is not caused by congestion. When it comes on in childhood, and at puberty, it is combined with general enlargement of the lymphatic glands and partial obliteration of the thymus; it is also apt to be attended with rickets and feeble muscular development.

Its course is generally chronic, but not unfrequently it is

somewhat acute; the cause of the acute symptoms when they occur, is a rapid and tumultuous addition to the bulk of the brain; this only takes place in some instances.

The majority of cases of enlargement of the brain which have fallen under WEST's notice in London, occurred in infants about six or eight months old. Their history has usually been, that without any definite illness, they had lost their appetite, and grown by degrees dull and apathetic, though restless and uneasy. Notwithstanding the general apathy, this restlessness is often very considerable, though it does not show itself in cries, as much as in a state of general uneasiness, and in frequent startings from sleep. Short gleams of cheerfulness occur when the children are awake, but these are usually very transient. The head seems too heavy to be borne, and even when its size is not much greater than natural, it hangs backwards, or to one side, as if the muscles were too weak to support it. If placed in its cot, a child who is thus affected, bores with its occiput in the pillow, while its head is almost constantly in a profuse perspiration. Convulsions sometimes occur without any evident cause, but threatenings of their attack are much more frequent than their actual occurrence, the child awaking suddenly with a start, and a peculiar cry, like that of spasmodic croup, the surface turning livid, and the respiration becoming difficult for a few moments, and the symptoms then subsiding of their own accord. Such attacks may issue in general convulsions, which may terminate fatally; but infants thus affected do not by any means invariably die of the cerebral disorder, but, being weakly, they are often cut off by the first malady that attacks them.

If life be prolonged the child loses flesh, and looks out of health, while enlargement of the wrists and ankles, shows the connection between this disease and rickets; a connection which becomes more evident in the second and third years of life. When the child survives infancy, or when as occasionally happens the symptoms of enlargement of the brain do not come on until dentition has been in a great measure accomplished, convulsions are of very rare occurrence. Complaints of headache, however, are frequent and severe; and, though drowsy in the daytime the child generally rests ill at night, and often awakes

crying and alarmed. Besides these symptoms, too, the child has occasional attacks of feverishness, with great increase of headache and giddiness, which last for a few hours or a day, and then subside of their own accord, while it grows by degrees more and more dull and listless, and its mental powers become obviously impaired.

It happens in some cases, that, as the child grows older, these symptoms become less and less severe, the health improves, the ricketty deformity of the limbs gradually disappears and the infant who had excited so much solicitude becomes at length a healthy child.

Chronic dropsy of the brain is the only affection with which enlargement of the brain is liable to be confounded. The diagnosis between the two affections is often by no means easy, though it is of much importance with reference to the treatment.

The symptoms of chronic dropsy of the brain generally come on earlier, and soon grow much more serious than those of enlargement of the brain, and the disturbance of the brain is throughout much more marked in chronic hydrocephalus than in hypertrophy. Convulsions, sopor and restlessness attend the early stages of chronic hydrocephalus, while spasmodic affections of the respiration are among the earliest indications of enlargement of the brain.

The form and size of the head, too, present peculiarities by which we may often distinguish between the two conditions; both diseases are attended with enlargement of the head, and in both the ossification of the skull is very tardy, but the head does not attain so large a size in hypertrophy of the brain, neither are the fontanelles and sutures so widely open.

The skull also presents some remarkable peculiarities; the head not only shows no tendency to assume the rounded form characteristic of chronic hydrocephalus, but its enlargement is first apparent at the occiput, and the bulging of the hind-head continues especially striking.

The forehead may, in the course of time become prominent and overhanging, but the eye remains deep sunk in its socket, for no change takes place in the direction of the orbitar plates, such as is produced by the pressure of fluid within the brain,

and which gives to the eye that unnatural prominence, and that peculiar downward direction which are so striking in cases of chronic hydrocephalus.

In chronic dropsy of the brain the anterior fontanelle is tense and prominent, owing to the pressure of the fluid within, but when the brain is enlarged, there is no prominence but an actual depression in this situation. WEST has more than once observed this condition in a remarkable degree, the depression not being limited to the anterior fontanelle, but being also observable at all the sutures.

When enlargement of the brain occurs in the adult, the symptoms that arise are in a great measure due to the compression which the organ undergoes from its bony case being too small to contain it. The symptoms are of course exceedingly obscure. —MAUTHNER and WEST.

Treatment.—Vinum-ferri, Ferro-citrate of Quinine, Iodides of Iron and Potash and Cod-liver Oil, have been used most frequently and successfully. Agaricus, Calc.-phos., Kali-carb., Mezereum and Rhododendron are the principal homœopathic remedies.

Daphne-indica is suitable when there is a sensation as if the outer part of the brain were inflamed and striking against the skull.

Sulphur, *Staphysagria* and *Stannum* when there is pain as if the brain were beating against the skull, or a painful pressing of the brain against the skull and occipital bones, in the evening, even after going to bed.

Chelidonium when there is a pressing in the brain, as if the skull were too narrow, and the brain would be pressed out of the eyes, nose or ears.

Baryta and *Conium* when the head seems too full as if it would burst; especially in both frontal eminences and in the orbits.

HYDROCEPHALUS.

DROPSY OF THE BRAIN.

In by far the greater number of cases the fluid collects in the interior of the brain, constituting what is called *internal* hydrocephalus in contra-distinction to other cases in which the fluid is contained in the sac of the arachnoid, and to which the name of *external* hydrocephalus has been given.

INTERNAL HYDROCEPHALUS.

The internal membrane of the ventricles of the brain is composed of a very delicate continuation of the arachnoid and pia-mater, and a layer of epithelium. The most frequent and important diseases to which it is liable, have, from one most striking characteristic which they present, viz.: an excessive accumulation of fluid, been included together under the title of hydrocephalus.

The disease may be acute or chronic, inflammatory, or non-inflammatory.

In the *acute inflammatory* form, a turbid fluid is found in the ventricles, composed of serum and lymph or pus; the lining membrane of the ventricles becomes dull, opaque, softened and even diffluent, so that shreds of it often appear in the inflammatory effusion in the ventricles.

The substance of the brain is in a state of acute œdema, and infiltrated to such a degree that it seems as if it were in a state of watery softening; hence the brain itself is swollen and actually increased in volume, so that its convolutions are forced against the skull and flattened.

It is very apt to be associated with tubercular meningitis.—Rokitansky.

In the *acute non-inflammatory form*, a clear, colorless, serous fluid, varying in quantity from one or two to six ounces, is found in the ventricles. Although the disease is often acute, it cannot be admitted to be inflammatory; it arises from congestions of various kinds, viz.: such as are connected with the development of the brain in childhood, or those produced by chronic eruptions on the scalp, by the irritation of morbid

growths within the skull, &c.; or it may be occasioned, too, by the congestions which follow concussion of the brain, or mechanical obstructions of the heart, chronic catarrh of the lungs, or bronchi, &c., &c. The result of these congestions is an excessive effusion of serum, first from the lining membrane of the ventricles, and then into the brain itself. It is frequently associated with enlargement of the whole system of lymphatic glands, and of the follicular apparatus of the intestinal mucous membrane; with enlargement of the thymus gland, with chronic catarrh of the bronchi, and with rickets.—ROKITANSKY.

CHRONIC HYDROCEPHALUS.

According to ROKITANSKY this disease may be divided into three varieties, viz.: 1st, into congenital hydrocephalus; 2d, that which commences at various periods after birth, but generally during the first six months; and 3d, hydrocephalus occasioned by a vacuum within the skull, from atrophy of the brain.

According to WEST, in the majority of cases the disease is not a mere passive dropsy, but is the consequence of a slow kind of inflammation of the arachnoid, especially of that lining the ventricles, which may have existed during fœtal life, or not have attacked the child until after its birth.

In 50 cases collected by WEST, some symptoms of it were observed in 46 instances before the child was six months old; in 12 of these the disease was congenital; and in 19 more, the malady was established before the child was three months old.

Symptoms.—The *early* symptoms vary; when it is congenital, indications of disturbance of the brain are generally apparent from the infant's birth; these are sometimes serious, such as convulsions, recurring almost daily; or slight, consisting of nothing more than squinting, or strange rolling of the eyes. The size of the head generally attracts attention before long, and causes importance to be attached to symptoms which otherwise might have given rise to but little anxiety. In some instances, however, the increased size of the head is not very obvious until the child is a few weeks old, although well-marked symptoms of mischief in the brain existed from its birth; en-

largement of the head, in fact, is by no means invariably the first indication of chronic hydrocephalus. According to West in 12 cases out of 45, fits returning frequently, had existed for some weeks before the head was observed to increase in size; in 6 instances the enlargement of the head succeeded to an attack resembling acute dropsy of the brain; and in 4 other examples, it had been preceded by some well-marked indications of mischief in the brain; in the remaining 23 cases, out of 50, no distinct brain-symptoms preceded the enlargement of the head.

In whatever way the disease begins, the child's health will have been noticed to be failing for some time, although the cause of its illness may not be apparent; impairment of the processes of nutrition is sure to be among its earliest symptoms. The child may nurse or feed well, and indeed may seem eager for food, but still it loses both flesh and strength; and often, although the head has not yet attained any disproportionate size, the child is unable to support it, either losing the power it had once possessed, or never attaining that which, with its increasing age it ought to acquire; the bowels are generally constipated, but diarrhœa often comes on for a day or two, and the evacuations are almost always unhealthy. In short, in the primary symptoms there is but little to distinguish the case from any other in which a young infant is imperfectly nourished; even, although occasional attacks of heat of head may be observed, attended with pulsation or tension of the anterior fontanelle, attended with crying and restlessness, alternating with a drowsy condition by day and restless nights, still these symptoms occur frequently enough from transient causes: they acquire a more marked significance, if coupled with an unusually open state of the fontanelles and sutures, even if no marked enlargement of the head be yet perceptible.

By and by, however, the increased size of the head grows very manifest, and the child's physiognomy soon assumes the distinguishing features of chronic hydrocephalus; the sutures become wider, the fontanelles increase in size, and the head assumes a globular shape. But the greatest increase in the size of the head is effected by the enlargement of the anterior fontanelle, and by the widening of the sagittal suture. The

forehead is projected forwards; the orbitar plates of the frontal bone are driven by the accumulating fluid from a horizontal into an oblique direction, and sometimes indeed they become nearly perpendicular, when by contracting the orbits they give to the eyeballs that unnatural prominence and that peculiar downward direction which constitutes one of the most remarkable features in cases of chronic hydrocephalus. In hypertrophy of the brain the back of the head is much larger than the front.—WEST.

The symptoms of disturbance of the brain that attend the advance of the disease differ much in severity; sometimes there is little but uneasiness and restlessness, aggravated at intervals when the head grows hot and the fontanelle grows tense; in other cases, convulsions occur frequently, from very slight, or no evident causes; in another set of cases, spasmodic attacks of difficult breathing, attended with a crowing sound in inspiration are apt to occur, even before there is much enlargement of the head.—WEST.

Treatment.—WAHLE says that Hellebor.-nig., Arsenicum and Sulphur are the principal remedies; he has often effected radical cures even in congenital hydrocephalus. He always commenced the treatment with Hellebore, and persisted in its use for eight or ten days. Against the spasms, Sulphur 30, was the most efficient remedy, all other seemingly appropriate remedies were useless. Aconite 30, was most useful against mental disturbances.

The treatment of GÖLIS of Vienna, was to have the head shaved, or hair cut close, and one or two drachms of the mild mercurial ointment rubbed daily into the scalp; the head to be constantly covered with a flannel cap, and $\frac{1}{4}$, or $\frac{1}{2}$ grain of calomel to be given twice daily, unless diarrhœa comes on. This plan requires perseverance for thirty to forty days. Hydriodate of Potash is safer and perhaps more efficient.

Methodical compression of the head with strips of adhesive plaster has been used successfully; and 18 cases out of 63, or 2 cases out of 7 are said to have been radically cured by puncture of the cranium and evacuation of the fluid.

CASE 1.—A rhachitic child, aged 3 years, had swollen joints, was unable to walk, even when supported, and finally became affected with full developed chronic hydrocephalus; the

sutures were widely separated; the child lay upon its back, covered with a sticky perspiration, it had constant fever, grasped at its head, became unconscious and passed its evacuations involuntarily.

Treatment.—Calc.-c. 30, one dose every week; in five weeks the dropsy of the head seemed removed and the enlargement of the joints lessened. By the continued use of Calc. the child gradually recovered perfectly.—IVANOVICH.

CASE 2.—A boy, aged 14 months, was attacked with inflammation of the brain which terminated in dropsy; spasmodic and paralytic affections ensued, and finally the child lay unconscious with all the usual signs of hydrocephalus.

Treatment.—The patient was entirely restored in the course of ten weeks by Bell., Bryon., Merc., Hell., Hyosc. and Sulph. —MALY.

CASE 3.—A boy, aged 1 year, had a very large and heavy head, with widely open fontanelles; the eyes projected over the edge of the orbits; there was strabismus; almost entire absence of all human expression; the child only made grunting and beastly sounds; the skin hung loose upon the emaciated hands and feet; the abdomen was much bloated; there was offensive diarrhœa intermixed with hard masses of fæces; involuntary discharge of urine and fæces; spasms and opisthotonos; canine appetite.

Treatment and Result.—From Jan. 6 to Nov. 18, the child received Calc. 200 and Sulph. 200, in alternation every ten or fourteen days, with constant improvement; the spasms lessened, the teeth came through, the eyes retreated into their sockets, the expression became human and pleasant, it improved in body and began to walk and speak.—BREDENOLL.

CASE 4.—A boy aged 3 years, had already suffered for two years with signs of hydrocephalus; his head was large, and inclined to fall forwards; the fontanelles were very large, the forehead projecting, the eyes sunken, the pupils dilated, face earthy and bloated; there was constant dribbling of water from the mouth; the teeth were small and imperfect; the limbs weak and unable to support the body; greedy desire for food.

Treatment.—Five doses of Bellad. 30, ½ drop doses, were given in the course of sixteen days, with evident signs of improvement. A feverish attack with aggravation of all the symptoms, was then relieved by Acon., followed by 2 doses of Bellad., without further benefit to the principal disease; hence 9 doses of Merc.-viv. 6, were given, 1 dose every three or four days, with remarkable relief from all the symptoms. The paralytic weakness of the limbs was removed by 2 doses of Phosph. 30 and China 6. Finally the child was perfectly restored.—SCHWARZ.

CASE 5.—A boy, aged 3 years, was attacked with dropsy of the head. Bellad., Hepar. and Conium diminished the great size of the head.

Sometime after he fell in the water, after which he could no longer stand upon his feet, nor move himself, nor speak, or eat; while drinking he pressed his tongue against the hard palate, so that one-half of the fluid ran out of the mouth again.

Treatment.—Hyosc. 18, 1 dose every night and morning removed this state in three days.—HARTUNG.

REVIEW.—*Calcarea* was used in 2 cases, in the 30th and 300th potencies; the latter in alternation with Sulphur.

Belladonna effected most in case 4, but was also useful in cases 2 and 5.

WAHLE calls particular attention to Hellebore, Sulphur and Arsenicum.

Mercurius was very useful in case 4.

The general paralytic state in case 5, was evidently in close connection with the previous state of the brain and was soon cured by *Hyosciamus*.

EXTERNAL HYDROCEPHALUS.

In this disease according to HOWSHIP the patient seems always disposed to doze, yet its senses are awake to the lightest and least impression; the peculiar symptom is that of being at one and the same time light-headed, yet perfectly sensible; the patient speaking incoherently to himself, yet if spoken to answering clearly and rationally. This peculiar state is supposed to occur only when there is an abundant serous effusion between the membranes, and none in the ventricles of the brain.

Treatment of Hydrocephalus.—Aconite is supposed to be homœopathic to congestion of the brain only.

Aethusa-cynapium to congestion of the brain and its sinuses.

Ammonium-mur. is homœopathic to atrophy and collapse of the brain.

Arsenicum, to inflammation of the membranes and substance of the brain, serous effusion into the ventricles.

Belladonna, to excessive congestion of the brain.

Bismuth, to serous effusion, here and there between the convolutions of the brain, and in the ventricles.

Bromine, to venous congestion and considerable redness of the pia-mater.

Brucea-antidysenterica, to great congestion of the left hemisphere of the brain and cerebellum, with effusion of a considerable quantity of serum into the ventricles.

Camphor, to violent congestion and inflammation of the membranes and substance of the brain, with softening.

Cannabis-sativa, to congestion and extravasation upon the arachnoid, clear serous effusion in the convolutions of the brain, throughout and into the lateral ventricles, with some softening of the brain.

Cantharides, to congestion of the brain, particularly of the cerebellum, which is covered with a thick layer of exuded lymph, attended with an effusion of a quantity of serum at the base of the skull.

Chininum-sulphuricum, to congestion of the brain and spinal marrow, red and white softening of the medullary substance, with effusion of serum.

Cicuta-virosa, against meningeal apoplexy, induration of the brain, serous effusion in one of the ventricles, and dark red fluid at the base of the skull.

Colocynth, against congestion of the surface of the brain, and inflammation of the pia-mater.

Conium, when there is a considerable quantity of water in the ventricles of the brain.

Digitalis, when the membranes of the brain are strongly injected.

Gratiola, when there is a fiery-red injection of the pia-mater.

Helleborus, when there is *no* fluid in the ventricles of the

brain, but the superficial veins are filled with black blood, and the pia-mater is considerably injected, the brain being softened and withering, or atrophied.

Hydrocyanic-acid, when the brain and its membranes are congested, with extravasation of blood, (true apoplexy,) with effusion of serum at the base of the skull; congestion of the walls of the ventricles.

Hyosciamus, when the brain is congested and the ventricles empty.

Laurocerasus, when the upper surface of the brain is congested, and also the inner vessels of the ventricles.

Nux-vomica, softening of the brain and spinal marrow, congestion of the cortical substance and pons varolii.

Oleander, when the ventricles of the brain contain a small quantity of reddish fluid, and the superficial vessels of the brain are tinged with blood.

Opium, when there is congestion and extravasation of blood, in and upon the brain; softening of the brain so that it was almost impossible to distinguish the medullary from the cortical substance; extravasation of serum at the base of the brain and in the ventricles.

Oxalic-acid, when there is effusion under the arachnoid.

Phosphorus, when there is a wide-spread and thick accumulation of yellowish-white, opalescent exudation (plastic lymph,) between the pia-mater and arachnoid, by means of which these two membranes are glued together, (meningitis).

Plumbum, when there is a considerable flatness (atrophy) of the convolutions of the brain, with paleness and softness of the parenchyma, brown clear serum in the middle ventricle, unusual softness or hardness of the substance of the brain, with clear serum at the base of the skull.

Secale, when the vessels of the brain are empty.

ACUTE AND GENERAL INFLAMMATION OF THE BRAIN.

IN ADULTS.

According to WATSON, acute inflammation does sometimes appear to invade at once the whole of the parts that are lodged within the skull, or, beginning in one part, it extends rapidly to all the rest. This disease as it occurs in adults presents two periods, which are marked by different symptoms, and are in most instances distinctly observable. In the first period, what are called symptoms of excitement predominate; in the second period those symptoms appear which are comprised under the term collapse. Sometimes these two periods instead of following each other are more or less mixed and confounded. But the distinction is real and requires to be attended to.—WATSON.

Period of excitement.—The symptoms are pain in the head, often intense and deeply seated, or extending over a large part of it; a sense of constriction across the forehead; throbbing of the temporal arteries; flushing of the face; injection of the eyes, which have a wild and brilliant look; contraction of the pupils; unusual sensitiveness to external impressions, amounting frequently to impatience of light and sound; violent delirium; want of sleep; paroxysms of general convulsions; a parched and dry skin; a frequent and hard pulse; white tongue; thirst; nausea and vomiting; constipation.

Modes in which the disease commences.—The attack may come on in three or four different ways:

1st. Sometimes there is a sudden alteration of manner, and the patient, complaining probably of his head, becomes all at once and furiously delirious; fever is also lighted up.

2d. In other cases the first thing noticed is nausea and vomiting, which may soon cease, or continue for several days, or even throughout the whole course of the disease. Great quantities of yellow, bitter, bilious fluid are brought up, and whatever is introduced into the stomach, even a small quantity of the most simple drink is immediately rejected. With this state of matters there is generally much constipation, and the bowels refuse to act except under the influence of strong purgatives. It is

very easy to mistake these cases for attacks of sick-headache, bilious derangement, &c., &c.—WATSON.

3d. Another set of cases of acute inflammation of the brain, commences with paroxysms of general convulsions, such as often usher in an attack of meningitis. This symptom according to ANDRAL is a much more certain sign of inflammation of the brain, than the occurrence of active delirium, and WATSON quite agrees with him in so thinking.

WATSON supposes that the cases which are characterized by early and fierce delirium are cases in which the inflammatory action has invaded the whole of the brain and its membranes simultaneously. It is more probable that a large portion of the *grey* substance of the brain is principally inflamed. He also assumes that when nausea and vomiting are the earliest symptoms, the inflammation has taken its point of departure in the cerebral pulp; in the substance of the brain. The seat of the disease is, however, doubtless in the corpora-quadrigemina and striata, (see Treatise on Headaches, p. xiv.) Finally, he guesses that when the attack comes on with a sudden fit of convulsion, the inflammation has commenced in the pia-mater or arachnoid. It is more apt to be located in the *white* substance of the brain.

Simple inflammation of the brain proper, without any simultaneous affection of the membranes, has been fully considered in the chapter on red or inflammatory softening of the brain, (see Treatise on Apoplexy, p. 143.)

Period of collapse.—The first or acute stage lasts for a variable period, i. e. from one-half to two days or more, and then it is succeeded by the second stage, or that of collapse. The patient then ceases to complain of headache; instead of being excited or wildly delirious, he mutters indistinctly, and falls into a state of stupor, from which it is difficult, and at length impossible to arouse him. His vision and hearing are no longer painfully acute; squinting and double vision are not uncommon; and the pupil, from having been contracted to the size of a pin's point, becomes first oscillating, then widely dilated, and ultimately motionless. Twitchings of the muscles and startings of the tendons take the place of convulsions, although some of the limbs may be agitated with tremors, or become powerless

and palsied. The face becomes ghastly and cadaverous; cold sweats break out; the sphincters relax; finally the coma becomes profound and life ceases.—WATSON.

Treatment.—In this disease, which is too often fatal under any mode of treatment, a mere symptomatic homœopathic procedure is ruinous. If too much attention be paid to the management of the delirium, convulsions or vomitings, the inflammation will progress rapidly and unchecked. *Aconite* should be used freely, internally and externally; if this fails *Veratrum-viride* may be used. In some cases *Opium* and *Aconite* should be given in alternation. As soon as exudation takes place, Mercurius, Hydriodate of Potash and Phosphor. are the principal remedies.

ABSCESS OF THE BRAIN.

According to VALLEIX it is much more rare to find a perfectly circumscribed abscess than a diffuse softening with suppuration.

The causes of this affection are very similar to those of inflammatory softening, such as external violence in young and vigorous subjects, absorption of pus in consequence of operations on distant parts, and especially from the suppression of chronic discharges from the ear.

Symptoms.—The most important one is *headache*, the pain of which is acute, persistent, and causes constant complaints from the patient, who almost always presses his head with his hand, contracts his brows, and assumes the strangest positions in the hope of escaping his agony. After the disease has lasted a certain length of time the pain subsides and even disappears.

The *intelligence* may be disordered in various ways; sometimes there is an active, more frequently a quiet delirium; at other times there is a marked dulness of the intellect, and the patient has an obtuse manner, does not answer questions, but continues to complain of his head. This hebitude generally follows after previous delirium and agitation.

On the *motor* side, we may observe convulsions, epileptiform attacks, or rigidity; or there may be paralysis more or less

complete, or merely a weakness and sluggishness of every movement, similar to the hebetude of the brain. The paralysis does not ordinarily set in suddenly, but sometimes it succeeds soon after the convulsions. The *sensibility* is not always diminished unless there is simultaneous paralysis.

Sometimes there is *fever*, with heat of skin, acceleration of pulse, redness of the face, &c.; in other cases there is none.

Vomiting and constipation are far from being constantly present; the respiration is not apt to be affected.

It is supposed that the symptoms of abscess of the brain from external violence are the most decided and acute, and that paralysis promptly follows the agitation and delirium. Abscess from disease of the bones of the skull, has less severe and urgent symptoms; while that which arises from suppression of a discharge from the ear, follows a slow and insidious course, with but few prominent symptoms.

When the abscess is seated in the *grey* substance of the convolutions, the delirium and agitation are the most marked symptoms; when it is located in the *grey* portions of the interior of the brain, rigidity of the limbs and convulsions are the most prominent symptoms; paralysis is most common when the disease is in the *white* substance; general paralysis occurs when the collection of pus is in the annular protuberance; when the abscess is in one hemisphere of the brain or cerebellum, the paralysis will be on the opposite side.—VALLEIX.

Treatment.—The truly homœopathic remedies against suppurative inflammation are Tartar-emetic, Cantharides, Rhus, Sabina and Phosphor. The solvents of the pus globules are: Kali-carb. and Baryta-muriatica.

HYDATIDS IN THE BRAIN.

There are several varieties:

1st. The *hydatids spuria* is merely a hydropic primordial cell; it is more frequently met with than the other varieties and may be found in almost every part of the brain.

Symptoms.—The pain in the head they cause is constant; in true hydatids it is intermittent. They are apt to be attended with loss of sensation, dulness of intellect and loss of memory.

2d. *Acephalocysts*, are very rare; of 21 specimens presented to KLENCKE for examination, only 3 were genuine; they are generally of the size of a lentil or pea, of an opaline color, and contain a mass of microscopic cells.

Symptoms.—These vary much; generally there is headache, but not more severe than in some other diseases.

If they are developed in the pons, fornix, crura-cerebri, hemispheres of the cerebellum, or base of the medulla-oblongata, or if they compress these structures, they induce peculiar affections of the muscular system, ending ultimately in epilepsy.

When confined to the cerebral hemispheres they cause stupor only, or headache, or in extreme cases, apoplexy.

If the acephalocysts be numerous, the respiration is apt to be slow; if they are seated in the corpus callosum the pulse is generally slow; if in the pes-hippocampi the pulse may be quickened.

If seated in the thalami-optici and crura-cerebri, they are apt to be attended with hallucinations, flashes of light before the eyes, or blindness.

If in the corpora-striata, or quadrigenema, we are apt to find spasms of the stomach, spasmodic colic, or paralysis of the colon.

If the cerebellum be implicated, there generally is paralysis of the bowels or bladder, with abolition of the sexual functions.

3d. The presence of *polycephalus* causes the rotary disease in sheep. In man it causes headache, rotation, loss of memory, and insensibility to light.

4th. The *cysticerus*, and also the polycephalus are apt to cause periodic headaches, owing to the greater or less active movements of the parasites; every motion of the neck, or the crown of hooks around it causes irritation of the brain.

Treatment.—Many of the symptoms produced by these parasites are relieved in a remarkable manner by brandy, for alcohol acts as a poison, especially upon the cysterceri and converts them into a torpid mass.

Nitrate of silver has relieved many of the gastric affections, also the trembling of the hands and convulsive action of the eyelids, &c.

Nux-vomica and Secale are supposed to exert a beneficial action upon them.

TUBERCLES OF THE BRAIN.

Under this head we do not refer to cases in which tubercle is present merely in the membranes of the brain, producing that granular appearance which has been alluded to when treating of tubercular meningitis, but to separate and independent deposits of tubercular matter into the substance of the brain itself.

Tubercles of the brain though exceedingly rare in the adult, are not very uncommon in the child: thus, while Louis met with only 1 case of tubercle in the brains of 117 adults who died of tubercular disease, Rilliet and Barthez found it 37 times in 312 cases of fatal tubercular disease in children.

West knows of no instance in which tubercle was limited to the brain in childhood, for if present there it always existed in other viscera, especially in the bronchial glands and lungs, shewing that it is but one of the results of that general cachexia which may show itself in any of the various forms of scrofulous or consumptive disease. This fact is very important in forming an opinion as to the nature of various local diseases of the brain; for softening of the brain, or abscess, or tubercles, hydatids or cancer, do not disclose their precise nature by any peculiar symptoms, or succession of symptoms. They all, sooner or later disturb the functions of the brain, and they may all disturb them very nearly after the same fashion. But we may judge sometimes, from other circumstances, that the disease is of this or that character; thus, if we find scrofulous or cancerous disease in other parts of the body, we may safely infer that the symptoms which denote disease of the brain, are caused by scrofulous or cancerous tumors there situated; but from the symptoms themselves, we can only learn that there is some morbid condition of the brain.—Watson.

According to Rokitansky the number of tubercles in the brain is usually small; one or two being met with in most cases, and more rarely, three, four, five or a few more; some extremely rare exceptions do occur in which twenty or more are found. When they are but few, each separate tubercle acquires a considerable size, the most usual size is that of a hazel or

walnut; when they are more numerous, no single one often is found much larger than a hemp-seed or pea, although I have seen at least twenty in one child's brain, and none less than a hazel-nut in size. Tubercles of the brain are also peculiar in not being generally aggregated together, but separated widely apart.

Every part of the brain is occasionally the seat of tubercle. They are very common in the brain itself, and less so in the cerebellum; they are rarely found in the pons, and still less so in the medulla-oblongata. As a general rule they are deposited in or near the *grey* substance, hence near the surface of the brain, or in the grey portions of the corpora striata or optic thalami. The corpus callosum, fornix, septum lucidum, and crura scarcely ever contain any.—Rokitansky.

Its most frequent combination is with tuberculosis of the absorbent glands; and next in frequency with tubercle in the lungs.

When seated near the surface of the brain, they may cause tuberculous inflammation of the membranes, and acute dropsy of the brain.

Symptoms.—These vary according to the number and location of the tubercles, and to the existence or non-existence of softening of the brain around them.

In one case, in a boy aged 3½ years, and in the left hemisphere of whose cerebellum West found a tubercle, there had been an almost constant and involuntary rotary motion of the head when lying down; but this is a rare symptom.

As they are generally seated near the surface of the brain, we would expect often to find delirium, stupor, or headache. In fact Hennis Green mentions pain in the head as the most constant symptom of the early stages of the disease, having met with it as a prominent symptom in 17 cases out of 20. This pain is often very severe, so that during its continuance the child shrieks with the agony of the suffering; but singularly enough it does not continue with this intensity for more than a few hours, and on the next day the child may be found to be no worse than usual. Vomiting in many instances attends these exacerbations of pain.

In other instances a general dulness steals over all the facul-

ties, and the child grows quite indifferent to what is going on around it; he may never complain of headache, but be fretful and cry if moved, yet be perfectly quiet if allowed to remain undisturbed, dozing for hours together.

According to GENDRIN when the tubercles are located in one cerebral peduncle, convulsions commence in one leg and from thence extend to the whole of the same side on which the peduncle is affected.

When they occupy the mesocephalon, the muscles of the face and especially of the mouth are most convulsed, and generally spasms only occur at a later period.

In a very few cases no symptoms are present; much more frequently, however, the signs of disturbance of the brain, though not entirely absent, are too vague to excite much attention and too slight to occasion much suffering, so that if they do not wholly escape notice, they are confounded with other indications of ill-health attendant upon the general tuberculization with which this disease of the brain is frequently associated. In these latent, or semi-latent cases death finally takes place rather suddenly, under the indications of the most serious brain-disease. This acute stage sometimes lasts for a few hours only, and a child who had shown no sign of head-affection, though probably the symptoms of tubercular disease of the lungs or other organs had long been present, suddenly sinks into a state of stupor, which soon deepens into a profound and fatal coma. In another set of cases convulsions take place suddenly, followed by paralysis of one limb, or of the whole of one side, and either is immediately succeeded by coma, or this does not come on till after the fits have recurred several times. In a third variety of cases death is preceded by symptoms of acute dropsy of the brain. This sudden outbreak of symptoms may take place without evident cause, or follow a not very severe blow or fall upon the head.—WEST.

When headache, nausea and vomiting are present, the case may still be obscure; for some delicate children have irregular attacks of violent headache, off and on for years, accompanied with vomiting, from slight causes or no apparent cause at all, and finally recover as their health becomes more robust. Some children may even have headache aggravated at intervals and

associated with occasional convulsive movements of one limb, and even with attacks of an epileptic character, and yet show by the confirmed health they subsequently attain to, that some cause of a less abiding nature than a tubercular deposit must have given rise to the disturbance of the brain.—West.

Affections of the motor system are, however, often among the earliest indications of this disease; convulsive movements are the most frequent of these; paralysis of a limb, or impaired power over it, usually succeeds the convulsions, and but seldom take place independently of them. Sometimes we observe nothing more than an occasional convulsive twitching of one limb, more frequently of the arm than of the leg, unattended with any loss of consciousness, or impairment of the intellect; but the seizure is more frequently attended with stupor, though the convulsive action may be confined to one side, or even to one limb. When convulsions, whether general or partial, have once occurred they are seldom absent for many days together.

The transition from the premonitory to the acute stage sometimes takes place gradually, the convulsions becoming more and more frequent, and the other brain symptoms more serious, and the intervals of freedom from suffering shorter; or the change takes place suddenly, and without such previous increase in the severity of the child's suffering as to make one anticipate its approaching death; and yet we cannot always discover such differences between the morbid appearances in the two cases as should explain the dissimilar course of the disease.—West.

When tubercles are seated solely in the corpus-striatum, there will probably be convulsive movements when a portion only is involved, and paralysis if the disease includes the whole of the organ.

If located in the optic thalami, there will be more or less loss of sensation.

Tubercular disease of the medulla-oblongata and pons-varolii, is attended with difficulty and irregularity of breathing.

Disease of the crus-cerebri is followed by convulsions or paralysis of the opposite side; also when the white substance of the brain is involved. The symptoms of tuberculosis of other parts of the brain will be similar to those which have been observed when hydatids are present.

Treatment.—The infants of tuberculous mothers should be weaned early, or given to a healthy wet-nurse, or what perhaps would be better still, they should be fed upon diluted cream; as milk, both human and animal, contains a large proportion of albumen and caseine, it should be entirely avoided. Milk, as is well-known, is a watery liquid, having in solution a certain amount of caseine, sugar of milk or lactine, extractive matter, together with several inorganic salts, (such as the Phosphates of Lime, Magnesia, and of the Per-oxide of Iron, the Chlorides of Potassium and Sodium, and Pure-soda,) and holding in suspension myriads of extremely minute globules of fatty matter, plainly visible through the microscope. Fresh milk is almost invariably slightly alkaline, but on exposure to air, especially in warm weather, it rapidly becomes acid, owing to the conversion of the sugar of milk or lactine, into lactic acid, under the influence of the caseine which acts as a ferment. If the milk has been long retained in the breast, this change occasionally takes place before being drawn; and in some morbid conditions also, the milk is found to have an acid reaction even when freshly drawn. Such milk would be especially injurious to children with a tendency to tuberculous ailments; if milk be used at all, the mother should be supplied with litimus paper to test each specimen before it is given to the babe.

Acidity of the stomach and bowels should be carefully obviated and prevented; still ordinary acidity of the digestive organs will not necessarily produce tuberculous disease. As the Chlorides and Phosphates of Soda and Potassa are deficient in tuberculous blood, it might be advisable to use these salts to correct or prevent acidity of the stomach and bowels.

As Iron is decidedly deficient in the blood of tuberculous subjects I have long been in the habit of using a combination of equal parts of Phosphate of Iron and Phosphate of Lime or Soda, thoroughly triturated together, and mixed with double its weight of Sugar, in order to prevent acidity of the stomach, and supply the requisite quantity of Iron to the system. Phosphate of Lime ought also be an excellent dietetic and preventive, if not curative remedy against tuberculous acidity. According to ANCELL crude tubercle contains but a very small proportion of Phosphate and Carbonate of Lime—say one per cent.—

whereas, chalky tubercles frequently weigh 10, 20 or 30 grains. Hence in order to form chalky concretions, the deposition and resorption of animal matter, such as Albumen and Caseine must have taken place to a very great extent, or for a considerable period. It appears to ANCELL that where the tendency to cretaceous aggregation has existed in the highest degree, the blood must have wholly or partially lost its tuberculous quality; and that after having secreted intractable tubercle, owing to this favorable change it pours out a blastema, which depositing its earthy salts, is in the main susceptible of resorption, and is actually absorbed, the earthy particles gradually accumulating in the tuberculous cavity. That some such process as this occurs, he thinks, follows from a consideration of the whole series of chemical facts. Supplying an excess of Phosphate of Lime to the system may perhaps favor and hasten these beneficial changes.

The acids in the normal gastric juice are: the Muriatic, Lactic and Acetic; the Muriatic generally predominates, although either may be in excess and require peculiar treatment. The chyme which is made from the fibrine of meat and coagulated albumen, contains much Muriatic acid; that which is made from quite fresh meat and milk contains an excess of Lactic acid; while that which is made from amylaceous and farinaceous substances and vegetables contains much Acetic acid. In some states of the system quite new and unusual acids are found, or get into the stomach, such as: Phosphoric, Uric, Oleic or Butyric, and even Fluoric acid. It is not yet known positively which one of these acids predominates in the tuberculous dyscrasia, but they all require their peculiar and specific antidotes. The best antidotes of Muriatic acid are: Zincum, Ferrum, Argentum and Ammonia; Soda, Plumbum and Baryta are the best antidotes for Phosphoric acid; the tendency to the formation of Uric acid in the stomach is best antidoted by Cuprum and Colchicum; while an excess of Lactic acid is best met with Zincum.—(See Treatise on Diseases of Married Females, p. 52.)

Hepar-sulphur. may correct acidity of the stomach, and neutralize the predominance of albumen in the blood, besides having a symptomatic relation to tubercular disease.

When deposits of tubercle have actually taken place, they cannot be removed by any known solvent. Still trials may be made with at least a shadow of a hope of success. Thus, if we admit with HECHT and SCHARLAU that tubercle contains 30 per cent. of Fibrine, the solvents of Fibrine may be used. According to DENIS if moist Fibrine be digested in a solution of Nitrate of Potash containing a little Soda, it gradually becomes converted into a substance in almost every respect identical with Albumen; being soluble in water, and coagulable by heat. Again, the alkalies and their carbonates and acetates entirely prevent the coagulation of Fibrine; and tolerably strong solutions of Nitrate of Potash, Nitrate of Lime, and Muriate of Ammonia, retard it for a long time; the Muriate of Ammonia, indeed, gradually dissolves Fibrine, after it has been allowed to coagulate.

If we assume that tubercle consists in an excessive formation and deposition of Albumen, the solvents of Albumen may be tried. Hepar-sulphur. has already been alluded to. Coagulated Albumen is also readily soluble in Potash and other alkaline solutions; the Phosphoric, Acetic and Tartaric acids, also appear to exercise a decided solvent action upon it, and when present even prevent its coagulating on the application of heat. On the other hand, the Nitric and Muriatic acids, the Bichloride of Mercury, and Ferrocyanide of Potassium coagulate and precipitate Albumen and hence may be more homœopathic to Albuminous tubercles.

Finally, if we assume that tubercle consists merely of Caseine, we may be obliged to resort to Acetic, or some other acid, for although Caseine coagulates and is precipitated by Acetic acid, it redissolves if the acid be added in decided excess. In fact, although Caseine is precipitated and coagulated by Acetic and nearly all the acids, it redissolves in a considerable excess of most of them.

The experienced physician can easily decide when to give the preference to one or the other of these remedies; or to use two or several of them in alternation or combination; also when it will be advisable to use the inhalation of the vapors of these medicines in combination with their internal use; and finally when to rely upon infinitessimal quantities in order to overcome

a qualitative or dynamic predisposition or tendency to tubercular disease, and when to give more massive quantities in order to remove absolutely material and quantitative deposits.

CANCER OF THE BRAIN.

The symptoms of cancer of the brain and its membranes are similar if not identical with those of tubercles or other tumors of these parts. An accurate diagnosis is seldom more than conjectured, except when the cerebral symptoms happen to coincide with the phenomena observed in other parts of the body, which may serve as a clue to the disease going on in the brain. Thus, tubercles in the brain are more common in children and young adults; hard cancer, is more common in persons over 40, while medullary cancer may occur in young subjects. In tubercular disease the skin is apt to present a pasty or doughy appearance; in cancer it often presents a peculiar straw-yellow color. As Watson truly observes various local diseases and tumors of the brain, do not disclose their precise nature by any peculiar symptoms or succession of symptoms; but if we detect signs of tuberculous or cancerous disease in other parts of the body, we may safely infer that the symptoms which denote disease of the brain are caused by tuberculous or cancerous disease there situated; but from the symptoms alone, we can only learn that there is some morbid condition of the brain. If there be signs of disease of the lungs, bronchial glands, peritonæum or bowels, the probability is that the disease is tuberculous. If there be disease of the breasts, axillary glands, womb, &c., &c., the probability is that the disease is cancerous.

Hence the treatment, although it may be homœopathic, must not be merely symptomatic; it must be directed against the nature of the disease, and not merely against its symptoms or manifestations.

However similar the symptoms of tubercular and cancerous disease of the brain may be, viz.: headache, blindness, paralysis, convulsions, &c., &c. yet there is a decided antagonism not only in the nature of the two diseases, but also in the localities which they prefer: thus, cancer of the breast, stomach,

liver, large bowels and womb, is very common; tubercular disease of these organs is very rare; tubercular disease of the lungs, spleen, small bowels, bronchial glands, peritonæum, &c., is sufficiently common, while cancerous affections of these organs is decidedly rare. Hence the remedies for cancerous disease may or must be injurious in tubercular disease, and vice versa.

In tuberculosis, the cellular, vascular, albuminous and glandular tissues are most apt to be affected; in cancerous disease, the gelatiniform, fibrous, albuminous or medullary and glandular parts. Caseine and Albumen are the predominant elements in the tuberculous dyscrasia; Gelatine, Fibrine, Phosphorised fat, Cholesterine, and perhaps Albumen are the most abundant constituents in cancer. Caseine is never found in cancer.

In scirrhus we may find from 0.2144 to 0.2778 of Gelatine; 0.1428 of Fibrine; 0.1388 of Phosphorized fat; and 0.0278 of Albumen; the rest water and salts.

Treatment.—The best remedies against the cancerous dyscrasia, are: Arsenicum, Alumina, Carbo-animalis, Soot, Calendula, Muriates of Gold and Soda, Donovan's Solution, &c.

ON THE

HOMŒOPATHIC TREATMENT

OF

INFLAMMATION AND DROPSY OF THE BRAIN,

&C., &C.

THE following remedies have been used most frequently, viz.: Aconite, Arnica, Belladonna, Bryonia, Chamomilla, Cuprum, Digitalis, Hellebore, Hyosciamus, Iodine, Opium, Rhus, Spts.-Nit.-dulc., Stramonium, Sulphur, Veratrum and Zinc.

ACONITE.

GENERAL REMARKS.—According to WARING the comparative activity of the different parts of the plant has been closely examined by Drs. FLEMING and TURNBULL. They agree that the *root* is the part which is most energetic, certain and eligible for medicinal use; the *seeds* rank second; the *leaves* third; the *flowers* fourth, and the *fruit* and *stem* last. The homœopathic tincture which is made from the whole plant is much weaker and more inefficient than the tincture of the root, because the root contains a much larger proportion of the active principle of the plant, (Aconitine,) than any other part, or all other parts combined. When the homœopathic tincture is diluted one-half, or even twenty times as it frequently is, it becomes a very uncertain and weak preparation to combat acute congestive or inflammatory affections, because Aconite is antipathic rather than homœopathic to these affections, and hence tangible or even massive doses are required. Although Aconite resembles Digitalis and Tobacco in its action upon the heart and arteries and is not

strictly homœopathic to inflammatory or actively congestive diseases, still it is used as a matter of course, or of routine, by the majority of homœopathists against the majority of these affections; consequently it frequently fails to produce any good effect, especially when the dilutions, either high or low are used. Lately, Dr. HENRY, homœopathic physician in Montgomery, Alabama, has found out that the Veratrum-viride, exerts a still more powerful action upon the heart and arteries; predicts that it will soon stand as a great rival to the long tried Aconite; and asserts that he prefers it to Aconite, and has never failed in reducing the action of the heart with it. Singularly enough, Veratrum-viride is quite as antipathic to fever and inflammation as Aconite.

According to FLEMING and WARING, when a small piece of the root of Aconite is chewed, it causes an increased flow of saliva, a peculiar numbness of the lips and tongue, with a tingling sensation, and partial loss of use of the lips. Its topical application is unaccompanied by either pain, redness or swelling, even when its pathogenetic effects are developed to the fullest extent; proving that it is not homœopathic to inflammation, but that it exerts a depressing and benumbing, or paralyzing effect upon the vascular system and nerves of sensation.

Given internally, Dr. FLEMING, divides its operation into four degrees:

First Degree.—Half an hour after a dose of 5 drops of the Tincture of the Root, warmth is felt in the stomach, with slight nausea, oppression of breathing, general warmth of the body, numbness, tingling and a sense of distension of the throat, lips and tongue. There is also a tingling at the tips of the fingers, with a peculiar sensation at the roots of the teeth; slight muscular weakness is generally experienced, with indisposition for exertion, either mental or bodily. In about half an hour more, the pulse will be found diminished in strength, and in another hour both the pulse and breathing will have become less frequent, viz.: the pulse will have fallen from 72 to 64, and the breathing from 18 to 15 or 16.

Second Degree.—If 10 drops be taken at first, or the original dose of 5 drops, be followed in two hours by another of equal amount, the above symptoms will supervene more rapidly

and with greater severity. The tingling will extend up along the arms, and the sensitiveness of the skin is more or less impaired. In one and a half hours, the pulse will probably have fallen to about 56 beats per minute and become smaller and weaker, still maintaining, however, perfect regularity. The respirations will be about 13 per minute and laboring, attended with great muscular debility, giddiness and confusion of sight, with lethargy, coldness of the skin and extremities.

Larger doses will be followed by the same symptoms to a more severe extent. The pulse occasionally falls to 40, or even 36, but more generally rises to 70 or 80, becoming small, weak and irregular; respiration is oppressed, and the skin becomes moist and cold.—FLEMING.

Of the allied remedies of Aconite, *Tobacco* acts specifically upon the stomach, solar plexus of nerves, heart, arteries and nerves of motion and muscular system. *Digitalis* acts principally upon the heart, arteries, kidneys, and serous membranes. *Veratrum-viride* upon the stomach, liver, bowels, heart and arteries. *Colchicum* upon the liver, kidneys, heart, arteries and fibrous tissues. *Tartar-emetic* and *Ipecac.* upon the stomach, solar plexus, skin and muscular system. *Aconite* upon the skin, sero-fibrous tissues, heart and arteries. All these remedies depress the action of the heart and arteries in a similar and specific manner.

Although I believe that the majority of TESTE's remarks on the Materia Medica are flippant and insincere, still I agree with him when he says, that of all the medicines used by homœopathic physicians, Aconite is the one which they use erroneously most frequently. As it only possesses the power of perturbating or depressing the action of the heart and arteries, and is not homœopathic to inflammatory local lesions, whenever inflammatory fever and local inflammation have already acquired a certain degree of intensity, infinitessimal doses cannot be administered without involving a loss of very precious time. Either, some decidedly homœopathic remedy must be used in small quantities; or more massive doses of Aconite must be given. TESSIER found that when inflammation of the lungs was at its height, the high dilutions only produced some slight effect upon the pulse, none upon the disease.—PETERS.

a. In opposition to the above, KREUSSLER says: whenever traces merely of inflammation of the brain present themselves, or whenever this disease seems fully developed, Aconite is the first remedy which ought to be given. It is not the question whether inflammatory fever is present or not, for pure inflammation of the brain or its membranes requires the use of this remedy from the very commencement of the disease, until effusions and exudations have taken place. Two or three doses of the 6th or 12th dilution may be given, and its action awaited for twelve or twenty-four hours. If not the least improvement occurs during this time, viz.: neither perspiration, sediment in the urine, nor bleeding of the nose, and the restlessness continues, followed by stupor and delirium, then another remedy must be used.—KREUSSLER. I venture to assert that either other remedies, or larger doses will be required in the majority of cases.—PETERS.

b. HEICHELHEIM says he has treated eight children in the first stage of dropsy of the brain and relieved them all with Aconite followed by Bellad.

c. SCHROEN asserts that when congestion of the brain with impending inflammation sets in during dentition of young children, he has always found *Aconite* useful; but large and repeated doses had to be given. KREUSSLER, with characteristic flippancy and dogmatism assumes that Aconite will not remove simple congestion, but only that stasis and congestion which is the first stage of acute inflammation.

CASE 1.—A girl, aged 10, had heat and redness of the whole body, especially of the head and eyes, contracted pupils, entire unconsciousness, delirium, dryness of the tongue, vomiting of greenish substances, subsultus, quickened respiration, pulse 120 to 130, with grasping at the head.

Treatment and Result.—Acon. 18, one drop in 6 spoonsful of water, 1 spoonful every half-hour; in six hours consciousness was restored, the fever and vomiting had ceased; *Bryonia* was given on the next day, and she was quite well in two days more. —GASTFREUND.

CASE 2.—A lady, aged 32, who had often suffered with severe headache, was suddenly attacked with symptoms which

denoted approaching inflammation of the brain. She ran in perfect despair about the room, complained of pain in the forehead, as if everything would be forced out of it; her head was glowing hot; she had nausea, white coated tongue, pain in the back, constipation for two days; pulse tranquil, and skin natural.—[I have frequently seen similar attacks in nervous and hysterical females, but never supposed that I had either threatened or actual inflammation to deal with.]—PETERS.

Treatment.—Aconite 6, 1 drop; in five minutes the pain abated; the patient soon became composed and slept till morning, when she was quite restored.—KREUSSLER.

CASE 3.—A boy, aged 5 years, sickened with the usual signs of inflammation of the brain, of which the following were the most prominent:

Symptoms.—Spasms of the limbs, alternating with trembling motion of them; vomiting of food or mucus as soon as he raised his head; starting up from sleep with delirium, or pain in both sides of the head; dryness and heat of skin; much thirst; full, hard and quick pulse.

Treatment.—Aconite 30, in 2 ounces of water, 1 teaspoonful every hour at first, then every two hours, with perfect recovery in three days.—WEBER.

CASE 4.—A maiden, aged 14, had suffered for twenty-four hours with the following symptoms of brain-affection: vertigo and vomiting whenever she rose up; constant pain in the forehead; delirium, sopor, screaming and starting up from sleep, with fixedness of look; her face was pale at times, at others red; skin hot and dry; thirst, and constipation.

Treatment.—14 doses of Aconite 30, removed the whole disorder in three days. The constipation was removed by Nux. 30.—WEBER.

CASE 5.—A girl, aged nine years, was attacked with inflammation of the brain, for which she received Bell. 4, 1 drop every three hours, for thirty-one hours without benefit.

Symptoms.—Wandering of the mind; constant chewing motion of the lower jaw; incoherent muttering; the pupils were contracted; expression of the eyes unsteady and indifferent;

face moderately flushed; skin moist; pulse full, hard, quick and frequent.

Treatment.—Aconite 3, 1 drop every hour; in five hours she fell asleep and slept for four hours; she awoke conscious, and was gradually restored on the third day.—NOACK.

CASE 6.—HAUBOLD cured a case of acute hydrocephalus, attended with vomiting; boring of the very large head into the pillow; by means of three doses of Aconite in thirty-six hours, followed by 1 dose of Bellad.

CASE 7.—After a somewhat hard fall upon the head, a boy, aged 2 years, was attacked suddenly with the following:

Symptoms.—He dozed a great deal, but often awoke suddenly, raised himself up and vomited up a clear, watery fluid; his tongue was clean and he drank again immediately afterwards, then fell asleep and awoke vomiting at least three times in every hour. He frequently started in his sleep; had rolling of his half-opened eyes; bored the back of his head into the pillow; grasped at his head automatically; frequent alternations of the color of his face from pale to red; picking of his nose; and gritting of the teeth.

Treatment.—Two doses of Aconite 3, 1 drop per dose, every hour; followed by Bellad. 3, 1 drop every two hours. On the following day he was quite well.—FRANK.

CASE 8.—A child, aged 3 years, was attacked with inflammation of the membranes of the brain, which terminated in effusion into the ventricles. It was given up as hopeless by two physicians.

Treatment.—Aconite was then given every half-hour, until the quickness of the pulse was lessened; then *Bellad.* was given in the same way. The child improved in some days, and had completely recovered at the end of a fortnight.—DUNSFORD.

CASE 9.—YELDHAM thinks that many of the slighter affections of the brain, giving rise to headache, and other symptoms clearly referable to disorder of that organ, are doubtless of an inflammatory character. Hence he would doubtless meet with, and cure more cases of inflammation of the brain than most other physicians.—PETERS.

A hearty young man, aged 20, caught cold on his journey home, about a week ago; yesterday was seized with shivering and violent pain in the head; took pills which acted freely, but without relief; he lies with his neck stretched out and head thrown back on the pillow, from which position he cannot bear to move; complains of intense pain in the forehead over the eyes; cannot tolerate the least light or noise; his brow is knit; eyes red and angry; his skin, especially that of the forehead is hot and dry; pulse 95, full and hard; mouth and tongue dry, with incessant thirst; no other pain, but is liable to rush of blood to the head.

Treatment.—Aconite 3, directly followed by Bellad. 3, every two hours; was rather better the next day; head not so hot and painful; thirst not so urgent; pulse as frequent, but not so hard and throbbing; skin cooler.—Aconite 3, and Bellad. 3, in alternation every three hours; recovered entirely in two days more.

Review.--Of nine cases, 7 were in children, and two in adults.

In case 7, a fall upon the head was the exciting cause.

Vomiting was present in 4 cases.

In most of the cases there was a state of excitement, with delirium, spasms, subsultus, &c., &c.; the pulse varied from 72 to 95, or even 120 or 130, and was full, hard, quick or suppressed. Yet in cases of poisoning with Aconite, the brain is remarkably undisturbed and clear, and the pulse is apt to be weak, small and slow.—Peters.

The stage in which it proved most useful was that of irritation, only occasionally approaching that of exudation.

Doses:—Aconite 3, was given twice, in repeated doses; Aconite 6, once; Aconite 18, once in solution, and repeated every half-hour; Aconite 30, twice in solution.

In 3 cases Aconite effected a cure alone.
" 5 " " was followed by Bellad.
" 1 " " " " " Bryon.

The *duration* of the attacks was twenty-four hours in 1 case; thirty-six hours in 1 case; three days in 5 cases; and fourteen days in 1 case.

Aconite probably acts as a powerful antiphlogistic sudorific, as it induces perspiration in the majority of acute cases in which it proves beneficial.

ARNICA.

According to SOBERNHEIM it facilitates the circulation of the lymph, and increases the absorbent powers of the collective lymphatic and venous systems. It was used and highly recommended in arachnitis with effusion by the celebrated GÖLIS of Vienna; he had the head of the patient freely and frequently bathed with an infusion of Arnica, when signs of effusion or exudation, or of a sub-paralytic state of the brain came on;—he also regarded it as the principal remedy against concussions of the brain, or spinal marrow; in sanguineous, or sero-lymphatic exudations from falls, blows, contusions, concussions, &c. It is very useful in low states of the system when there is dulness of the senses, dejection of spirits, drowsiness, sopor, or even stupor, or muttering delirium with dryness and blackness of the tongue, &c., &c. If it fails, Hydriodate of Potash may be used internally and externally, aided or not by a few doses of Iodide of Mercury, or of Apocynum-cannabinum.—PETERS.

CASE 10.—A delicate boy, aged 2½ years, was attacked with the following symptoms about five weeks after he had had an attack of measles.

He complained of pain in his head; squinted; was afraid of falling, and at times even fell backwards; he had attacks of vomiting, cramps of the hands, and fits of screaming; was only comfortable while lying upon his back; had attacks of unconsciousness, from which he could only be aroused by loud talking; his head was hot; pupils dilated; breathing anxious; urine scanty and red; pulse quick and small.

Treatment and Result.—Aconite 9, followed in three hours by Bellad. 12; but the disease increased steadily for nine hours, when he became exceedingly restless, with severe convulsions of the limbs, violent fits of screaming; he was only easy when lying on his right side, with his head bent far back; the pupils were very much dilated; eyes entirely insensible to light; he was perfectly unconscious, and grasped at his head.

Arnica 3, in 1 drop doses; by the next night he could open his eyes; his consciousness returned the next morning; he wished for food, and to be carried about, but was unable to hold his head up; the pupils were somewhat contracted; his urine turbid, with a yellow sediment; and he was very irritable. On the second day he attempted to stand, but fell over; Arnica 6 was given. On the third day, a return of fever was removed by Aconite. On the fifth day he seemed restored and had some appetite. Merc. 2 finally restored him perfectly in fourteen days.—MALY.

CASE 11.—In a case of acute hydrocephalus, in which Acon. and Bell. afforded no relief, Arnica 6, repeated every four hours, effected a rapid improvement.—HAUBOLD.

CASE 12.—Inflammation of the brain with violent symptoms in a maiden, aged 21, arising from a fall upon the head, was soon removed by several doses of Arnica 4; remaining blindness was cured by Bellad. and Opium.—THORER.

REVIEW.—It has been decidedly useful in the second stage of hydrocephalus, especially when induced by falls or blows upon the head.

ARSENICUM.

This remedy ought to prove one of the most efficient homœopathic remedies against serous inflammations in general and inflammatory dropsies. One of its most marked and frequent effects is to produce dropsical effusions about the head and face, attended with fever and great scantiness of the urine. It is most homœopathic to the acute variety of hydrocephalus, yet WAHLE only recommends it in the chronic form, after the previous use of Hellebore and Sulphur, and when the patient is peculiarly irritable and passionate.

CASE 13.—A boy, aged 6 years, had been drooping for some time, finally he had all the symptoms of brain-disease, accompanied by gastric derangement; he lay doubled up in bed, with his knees drawn up to his stomach; bowels very sensitive to touch; was drowsy and heavy, and lay in a stupor with half-closed eyes and open mouth, whenever he was not disturbed;

when aroused, and also at other times he often started and screamed out with a loud and piercing cry; his features were sunken; mouth and nostrils sore, dry and black; his tongue dry and parched, with a thick, brownish-yellow coating; red edges and papillæ. The skin of his whole body, but more particularly of the head and bowels was hot and dry; he was thirsty and had no appetite; his bowels loose and evacuations unhealthy; pulse 125, hard and incompressible; he was annoyed by a short hacking cough.

Treatment.—Arsenicum 6, every four hours; at the end of two days he seemed much the same, only his tongue appeared to be cleaning at the edges, and his thirst was not so great. The Arsenicum was continued for three days more, with only slight shades of amendment; he was then ordered Hellebore 6, every four hours, with decided improvement at the end of the second day; his tongue became moist and cleaned off rapidly; skin cool, thirst moderate, pulse less frequent and more soft, eyes clear, bright and intelligent, little or no screaming or drowsiness. He was perfectly restored in a few days more, under the continued use of Hellebore.—YELDHAM.

BELLADONNA.

GENERAL REMARKS.—*a.* This remedy acts specifically upon the blood, brain, nervous, muscular and lymphatic systems, also upon the throat, skin and kidneys.

Its action upon the *blood* is similar to that produced by Alcohol, or extreme heat of the sun; there is a commotion and actual expansion of the blood, as is shown by the quickness and fulness of the blood-vessels, heat and redness of the face and skin. It would seem to cause an intense arterial and inflammatory condition, but in fact it causes a tumultuous conversion of the arterial blood into venous, for after a while the apparent increased arterial action ceases, and excessive and predominant venosity supplies its place. The apparent arterial storm lasts for about twelve hours, when great venosity becomes apparent; the redness of the face gives place to lividity; the veins everywhere seem to be crowded and overfilled; the muscles become relaxed; confusion and stupefaction of the brain ensue; but

finally profuse sweats and urination restore the balance of the system.

It may be that this powerful commotion and intoxication of the arterial system is removed by the exertions or natural functions of the venous and lymphatic systems, which absorb or remove the noxious element from the arterial system, and thus become contaminated themselves.

Its action upon the *brain* is that of a powerful irritant or stimulant, unless the dose be in great excess, when the powers of the brain are completely overcome or stupefied; Belladonna stupefaction may also arise from exhaustion from previous over-excitement.—(See Treatise on Mental Derangement.)

Its action upon the *muscular* system is rather depressing than exciting; Belladonna convulsions are rare, and when present slight; while paralysis of the sphincters, such as dilatation of the pupils, of the neck of the bladder, womb, and the rectum are common; besides it is one of the best palliatives against those wandering pains in rheumatism, which arise from spasmodic contraction of the muscles, caused by the fleeting irritation of the poison of rheumatism; also against rheumatic colicky pains from spasmodic contraction of the muscular coat of the stomach and bowels.

Its action upon the *throat* and *skin* is similar to that produced by the poison of scarlet fever.

Its action upon the kidneys is very decided; the secretion of urine is increased excessively.—Peters.

b. Lobethal says he gives 2 or 3 drops of the tincture of Bellad. in several spoonsful of water, against violent congestion towards the head in young children, with threatening of inflammation or dropsy of the brain, with far more confidence than he does the 24th or 30th dilution. In slighter and more chronic cases, in some of the latter of which he has several times succeeded in effecting cures even when there was entire dulness of the senses, he prefers the 24th or 30th dilutions to the lower potencies.

c. Kreussler advises the 18th or 24th dilution, repeated twice a day, when there are aching and outward pressing pains with dull stitches in the head, preceded by dizziness and feeling

of intoxication; when the patients stare fixedly before them, and their faces and eyes are much flushed; when infants bore with their heads into the pillow; also when there is retention of fæces and urine, which afterwards pass off involuntarily; the thirst being excessive, the pulse frequent and quick. When improvement sets in the doses are to be repeated less frequently than twice a day.

d. KNORRE thinks that Bellad. is most indicated in the *first*, or inflammatory stage of hydrocephalus, when this is strongly marked and bears an arterial, or venous-inflammatory character rather than a torpid or sub-inflammatory. In the *second*, or incurable stage it is of no further avail, except that it sometimes relieves the vomiting, and that perhaps only imperfectly.

IN CHILDREN.

CASE 14.—A girl, aged 6 years, after several days' sickness, had the following:

Symptoms.—Acute fever, general heat of body, redness of the face, quick, hard pulse, quick breathing, sleepy-drowsiness, frequent vomiting, gritting of the teeth, and great anxiety and restlessness while awake.

Treatment.—Bellad. 3, 15 drops in 3 ounces of water, 1 teaspoonful every hour; with relief in twenty-four hours and speedy recovery.—ELWERT.

CASE 15.—A boy, aged 6, had been sick for six or eight hours, with violent fever, quick pulse, hurried breathing, trembling, great redness of face, general dry heat of skin, drowsiness, frequent starting, fixed and glassy look, cramp of the jaws.

Treatment.—Bellad. 3 relieved him in twenty-four hours.—ELWERT.

CASE 16.—A boy, aged 5, had suffered for several hours with active fever and nervous excitement. He received Aconite 3, followed by general perspiration and by increase of the disease; he was aroused with difficulty, stared fixedly, and did not understand when spoken to, had startings and tremblings of

the limbs, jerks, twitchings of the muscles of the face; pulse not to be counted and respiration hurried.

Treatment.—Bellad. 3, 10 drops in 3 ounces of water, 1 teaspoonful every half-hour, with evident improvement in twenty-four hours.—ELWERT.

CASES 17 and 18.—Two similar cases were treated with Bellad., one with 15 drops of the tincture in two ounces of water, the other with the second dilution; the doses were repeated every quarter or half-hour.—ELWERT.

CASE 19.—A girl, aged 5 years, had been sick for twenty-four hours; she had passed a sleepless night, screamed, raged, spoke in a confused manner, her face was bright red, forehead hot, eyes glassy, protruding and injected, the carotids beat violently, pulse could not be felt on account of her restlessness; urination involuntary.

Treatment.—3 doses of Bellad. 30, cured her so quickly that she could leave her bed on the fifth day.—SCHWARZE.

CASE 20.—A male infant, aged 13 weeks, had three attacks at short intervals of time, as follows:

Symptoms.—Red, scarlet-colored spots appeared upon the abdomen, and after they disappeared he had constant drowsiness, squinting and rolling of the eyes, frothy mucus before the mouth, green stools and whitish urine; he was only aroused from his stupor by attacks of suffocative cough.

Treatment.—6 doses of Bellad. 30, 1 dose every twenty-four, thirty-six or forty-eight hours removed the brain-affection in six days; the suffocative cough, with vomiting, greenish and fluid stools were removed by Ipecac. 30, followed in twenty-four hours by Veratrum, in the course of five days more.—Dr. B. in D——.

CASE 21.—A delicate boy, aged 8, played for a long time in the sun on a hot July day; soon after he was attacked with violent headache, fever, drowsiness and stupor; every quarter or half-hour he would start up suddenly, with shrill screams, then mutter several words, and grasp at his head; his pupils were unequally dilated, especially the right; his face much reddened; skin burning hot; and fever ran very high.

Treatment.—Bellad. and Acon. 6, in solution, every two hours; after a few doses, profuse perspiration set in and lasted all night; he awoke in the morning as after a long sleep, and was quite restored in the course of the day.—RAMPAL.

CASE 22.—A 4 year old, spongy and ricketty child, was attacked with fever attended with evening and night-aggravations, violent headache, and inability to sit up.

Treatment.—1 dose of Bellad. 24, benefitted him so much in twenty-four hours that all danger seemed over. A similar attack in a healthy 3 year old child, was cured by the same treatment.—MORITZ MÜLLER.

CASE 23.—A healthy girl, aged 8, was exposed to the hot sun in July, and became sick on the following night; she was treated allopathically for several days, and was left with the following:

Symptoms.—Violent headache, face pale and suffering, unconsciousness, with delirium about food; she was constantly boring her fingers in her nose, had great heat of the body with thirst, and some perspiration upon the head.

Treatment.—Bell. 30, followed by sound sleep for several hours, from which she awoke better, but with a violent cough, which caused severe pains in the head. Bryon. 12, 2 doses in twenty-four hours completed the cure.—SEGIN.

CASE 24.—A delicate child, aged 3 years, who had had two attacks of inflammatory brain-affection, and recovered under allopathic treatment, was taken with a third and very violent paroxysm. Bellad. 3, 1 drop in divided doses soon relieved her. —SEGIN.

It is doubtful whether any child would survive three attacks of inflammation of the brain under any mode of treatment.—PETERS.

CASE 25.—A strong and well-nourished child, aged nine months, became restless, coughed much, started in its sleep, and was attacked with repeated convulsive movements of the face and limbs.

Treatment.—Bellad. 30, produced rapid relief; a similar attack, eight days after, was relieved in the same way; but in

two days more there was a second relapse, attended with a red, psydracious eruption. Bellad. 30, followed by Sulph. 30, effected a radical cure.—SEGIN.

CASE 26.—A male child, aged 3 years, whose brother had died a year before of inflammation of the brain, was attacked with similar signs of commencing disease.

Treatment.—Bellad. 30, only relieved the vomiting; but after 4 doses of Aconite 24, followed on the next day by Bellad. 30, a rapid improvement ensued, and perfect recovery on the fourth day.—SEGIN.

CASE 27.—A robust boy, aged 10 months, had been sick for two days.

Symptoms.—Lachrymose, irritable and restless at night; sleeplessness, or half-slumber with frequent startings; pungent, dry heat; hanging backwards of the head; jaws dropped; and seemed to have thirst, but rejected the proffered drink; loose stools, with some straining.

Treatment.—Bellad. 30, at night; his sleep was more quiet, was more lively in the morning, but still irritable and inclined to cry. A violent increase of fever was relieved by 2 doses of Aconite 24, and on the fifth day of the disease the fever was very slight, but the irritability and depression were great. Bellad. 30, was followed by quiet sleep, pleasant awaking, moderate heat, profuse sweat and urination during the day, and greater clearness of mind. Recovery on the fourth day of treatment, and sixth day of the disease.—SEGIN.

CASE 28.—A child, aged 2½ years, whose sister had died one year before of inflammation of the brain under allopathic treatment, was treated allopathically for several days, constantly growing worse.

Symptoms.—Sensitive, irritable, lachrymose, half-slumber from which it often started up in a fright; frequent flushes of fever; a red, moist eruption behind the ears.

Treatment.—Bellad. 12, repeated in three hours; in five hours after the second dose, she was more quiet; 3 more doses of Bellad. were followed by quiet night sleep, and earache in the morning. Sulph. 12, was followed by boring with the fingers in the mouth, nose and ears, and profuse urination. Bellad.

12, followed in twenty-four hours by Merc. 1 and Sulphur, effected a recovery on the fifteenth day of treatment.—Segin.

CASE 29.—A boy, aged 7 months, was suddenly attacked with frequently repeated vomitings, high fever and involuntary movements of the facial muscles and arms; also with great restlessness, constant boring of the head in the pillow, and remarkably dilated pupils.

Treatment.—Bellad. 5, four doses, one every two hours, from evening until midnight; after two o'clock at night, all these threatening symptoms subsided, and he was quite well on the next day.—Segin.

CASE 30.—A boy, aged 7 years, very sensitive and delicate, with tendency to scrofula, was attacked suddenly, five weeks after having the measles, with violent fever, pulse full and 100, skin dry and hot, especially on the head and stomach, eyes brilliant and injected, also sensitive to light, pupils contracted, thirst and constipation.

Treatment.—Aconite 1st dilution, 6 drops in solution, 1 teaspoonful every half-hour; at the end of four hours the symptoms had much increased, pulse was very hard, full and 150, with violent throbbing of the carotid and temporal arteries; the skin of the whole body was glowing hot and dry; face red and bloated; eyes still more reddened, and sensitive to light, and only one-half closed during sleep; there was deliriun, with grasping of the hands at the bed clothes; and great dryness of the tongue.

Treatment.—Bellad., 1st dilution, 10 drops in water, 1 teaspoonful every half-hour in alternation with Aconite, also cold applications to the head; perspiration sat in some time after midnight, followed by greater quiet, and return of consciousness in the morning; the pulse was soft and had fallen to 120; after a restless night he had a movement of the bowels on the third morning and pulse fell to 100. Bellad. 3, three drops in solution, one teaspoonful every hour, was followed by recovery on the fourth day.—Schweickert.

CASE 31.—A girl aged 5, had been sick for three days.

Symptoms.—Face hot, red and bloated; boring with the head into the pillow; eyes half open during sleep, or else much

distorted; much thirst, no appetite, stools seldom and in small hard lumps; jaw dropped; nose quite dry; grasping at the head, during the heavy sleep; sudden starting up in a fright, with anxious staring about, and quick relapse into stupor.

Treatment.—Bellad. 30, followed by sound sleep for two hours, and speedy recovery.—BETHMANN.

CASE 32.—A little girl, aged 2½ years, had been failing in health for some time; three nights ago became hot and feverish, and soon became very ill indeed; lying about the room, complaining of headache, and referring all her suffering to her head, she was drowsy and heavy; eyelids drooping; eyes sunk deep in their sockets; mouth parched; cheeks flushed; head and body dry and hot; pulse quick and throbbing; tongue white, with red points upon it; great thirst; quick breathing, some cough; bowels quite regular; she avoided light and was distressed at the least noise; starts suddenly from her sleep, and screams as if frightened.

Treatment.—Aconite 12, every four hours, without benefit, as she still remained drowsy, with constant starting and screaming, heat and thirst. Belladonna 6, every two hours, followed by great relief, fever and thirst diminished, slept well, did not scream or start, tongue cleaning, her look was placid and intelligent, and she was able to sit up a little. Continued Bellad. 6, three times a day, and was quite restored on the sixth day.—YELDHAM.

CASE 33.—Threatened hydrocephalus. A delicate boy, aged 5, has been complaining for some time of headache, loss of appetite and listlessness; is now quite chilly, creeping into the fire, although a very warm day; has a staring, unmeaning look; does not answer when spoken to; pupils sluggish; pulse slow and feeble. The parents state that they have already lost two children with dropsy of the brain, and fear that this little boy is going off in the same manner.

Treatment.—Bellad. 3, and Ipecac. 3, in alternation; on the next day there was some improvement. Bellad. 3, and Tinct.-sulph. in alternation; in five days more he was almost well, and the cure was completed by Pulsatilla 3.

Subsequently his little sister was affected in much the same way, and was restored by similar treatment.—Brit. Jour. Hom. Vol. 9, p. 585.—Dr. SHARP.

Cases which approach the second stage of Acute Hydrocephalus.

CASE 34.—A boy, aged 3½ years, after headache for several days, was attacked with violent vomiting, heavy stupor with snoring, from which he could hardly be roused; convulsive starts shook his whole body occasionally; his head was glowing hot, and thrown backwards; his cheeks alternated from glowing red, to pale; eyes rigid, insensible, glassy, somewhat reddened, half-open, and turned upwards; pupils dilated, at times insensible to light; breathing quick, deep, heavy and hot; pulse full and hard at times, at others small and contracted; skin hot, and dry; entire unconsciousness, confused speech, startings and vomiting.

Treatment.—Bellad. 400, in a wine-glass half-full of water, one teaspoonful every hour; in six hours he was much better and the Bellad. was omitted. In fifteen hours consciousness was restored, and fever lessened; well on third day.—STAPF.

CASE 35.—A girl, aged 3 years, was attacked from taking cold during the desquamation of scarlet fever, with:

Symptoms.—Great restlessness, drowsiness, unconsciousness, boring with the head in the pillow, parchment-like dryness of the skin, with large drops of perspiration upon the face, constant rolling of the eyes, great thirst, and frequent vomiting.

Treatment.—Tinct. Bellad., one drop per dose, every hour, for five hours; pimples broke out upon the scalp, the glands of the neck swelled, loose stools set in, and quiet sleep, followed by return of consciousness and great relief. Several doses of Bellad. 3, completed the cure.—F. MÜLLER.

CASE 36.—A boy, aged 3 years, was attacked with an inflammatory affection of the brain, during the period of desquamation of scarlet fever.

Symptoms.—Swelling of the parotid and cervical glands; he lay constantly in a soporose slumber with bloated and red face; short, rattling and groaning respiration; involuntary stools; loss of speech and consciousness; inflammation of the mouth; thin offensive stools; red and hot urine.

Treatment.—Bellad. 30, 20 doses, one every four or six hours; consciousness commenced to return in twelve hours, followed by more quiet sleep and voluntary evacuations. Profound sleep was removed by two doses of Tartar-emetic 12.—Gross.

CASE 37.—A previously healthy girl, aged 2½ years, was attacked with vomiting, convulsions and fever; on the second day she had the following:

Symptoms.—She lay in a soporose slumber, from which she started up at times, grasped at her head, which was very hot; bored with her head into the pillow; rolled her head about; when roused she only opened her eyes one-half, stared stupidly before her; pupils dilated, with squinting; paleness of the face; nose pinched, dry and stopped up; lips covered with a brown crust; skin parched and hot, with traces of a purplish scarlet-rash; abdomen sunken; constipation for six days; involuntary urination. Her head fell back whenever it was raised up; she uttered a peculiar cry and was very uneasy whenever she was raised up from the horizontal position, or even moved. Did not answer questions or pay any attention to what was going on around her.

Treatment.—Bellad. 3, one drop four times a day; after the first three doses violent convulsions sat in, and then the disease gradually subsided, until the fifth day when she was quite restored.—Knorre.

CASE 38.—A girl, aged 15 months, was attacked with fever and stupor, and was treated allopathically for six days, when she presented the following:

Symptoms.—She lay with closed and agglutinated eyes, when they were opened they looked dim; constantly groaning; heard nothing; wished for nothing, and could not speak a loud word; tossed the left arm and leg about, and held them up in the air; her face was pale and sunken; skin and nostrils dry;

breath short and quick; tongue moist; she could drink when raised up, but let her head fall back immediately; pulse very frequent and irritable, with a false hardness, beating more violently in the right, than in the left arm; abdomen drawn in, and painful to touch; stools and urine were passed involuntarily.

Treatment.—Bellad. 24, one drop; in five hours frequent greenish stools sat in, followed in twelve hours by relief, and ability to open the eyes, although the left eye was only half opened. On the eighth day, Chamomilla 12. was given with transient relief, followed on the tenth day by increased restlessness, whimpering during the attacks of diarrhœa, tossing off of the bed-clothes; the skin was dry and torpid; cough spasmodic; breathing quick and short; nose reddened. Bellad. 30, 1 drop, was followed by recovery on the fourteenth day. —Moritz Müller.

CASE 39.—A boy, aged 3½ years, was attacked during the period of desquamation of scarlet fever, with discharge from the ears, and inflammation of the brain sat in when this ceased. He was treated allopathically and left in the following condition:

Symptoms.—Restlessness; tossing about of the body; grasping at the head with the hands; paleness and shrunken state of the face, with pinched nose; dilatation of the pupils; boring of the head into the pillow; heat of the head; stupefaction; brown and blackish tongue; the child desired nothing, but drank water when it was offered; skin dry and burning hot; pulse small and frequent; some œdema of the scalp.

Treatment.—Tinct.-Bellad., half-drop, every two hours; the following night was very restless, but perspiration followed by some repose ensued; boils broke out upon the scalp and back; re-appearance of the discharge from the ear. Bellad. 3, one drop every four hours, followed by quiet sleep, perfect restoration of consciousness; desire for food; offensive stools; Bellad. 3, every night and morning only, was succeeded by perfect recovery in ten days.—F. Müller.

CASE 40.—A little girl, aged 2½ years, previously healthy and intelligent, had been sick for five days, notwithstanding the use of Aconite, Pulsat., several doses of Calomel, again

followed by Aconite. The exciting cause of the attack was measles with scanty and livid eruption.

Symptoms.—Stupefaction; slumber with half-opened eyes; gritting of the teeth; starting up from sleep; whimpering, alternating with violent motions of the limbs; tossing to and fro of the body; attempts to get out of bed; wild delirium; congestion to the head; violent pulsation of the carotids; boring of the head into the pillow; grasping at the head; alternating paleness and circumscribed redness of the face; squinting; very frequent and irregular pulse.

Treatment.—Bellad. 2, every three hours; the second dose was followed by more quiet sleep and improvement of most of the symptoms; on the eighth day of the disease, after a fresh exacerbation, sweat sat in at night, and quiet sleep was followed by gradual improvement. She recovered entirely under the continued use of two doses of Bellad., daily.—DIEZ.

CASE 41.—Bellad. 30, in 1 drop doses acted very favorably and promptly in a case of acute dropsy of the ventricles, attended with opisthotonos, and unconscious stupefaction in which the patient lay part of the time as if in an apoplexy, but from which it started up occasionally in great alarm and agony as if from severe pain.—KAMMERER.

CASE 42.—A boy, aged 2½ years, had been treated allopathically without avail, but was restored in fourteen days with Aconite and Bellad.; Hyosciamus and Veratrum were also somewhat useful; but repeated doses of Bellad. effected the most good.—SCHINDLER.

CASE 43.—A girl, aged 18 months, took cold during an attack of measles, and the eruption receded.

Symptoms.—Much thirst; squinting; boring of the head in the pillow; dripping perspiration on the head; spasms, during which the head was drawn back to the spine; she lay constantly in a stupor with half closed eyes, and widely dilated pupils.

Treatment.—Bellad. 30; on the next day there were no convulsions and all the other symptoms were improved; it was soon out of danger, and recovered entirely on the fourth day.—BETHMAN.

CASE 44.—A child had lain for two days in a deep stupor, with convulsions and slow pulse; the eyes were half closed, covered with mucus, and squinting.

Treatment.—Several doses of Bellad. 30, effected a cure in three days.—BICKING.

CASE 45.—A boy, aged 4 years, was attacked six weeks after having the measles with Encephal. insolationis, attended with violent tonic and clonic cramps; pulse hard, small and from 160 to 170.

Treatment.—Aconite 1, ten drops in water, and Bellad. 1, in the same doses, in alternation, every half, one, or one and a quarter hours, a teaspoonful at a time. Recovery on the fifth day.—SCHWEICKERT, Jr.

CASE 46.—A one year old boy, had all the signs of effusion into the ventricles.

Treatment.—Bellad. 1, in solution, one teaspoonful every two hours, followed by Sulphur 3, and again by Bellad. A cure was effected in four weeks, and no relapse had occurred at the end of seven months.—HEICHELHEIM.

CASE 47.—A girl, aged 5, had been sick for three days; she neither spoke nor ate; her head was hot and drawn backwards; pupils much dilated and insensible; pulse quick and moderately full.

Treatment.—Bellad. 12, 3 drops in a glass of water, one teaspoonful every two hours; the patient recovered quickly.—SCHROEN.

IN ADULTS.

CASE 48.—A powerful man, aged 30, sickened suddenly after taking cold; on the second day he had:

Symptoms.—Sleeplessness; dizziness on attempting to sit up; violent delirium; raging, screaming, attempting to get out of bed, tossing off the bed clothes, and tossing to and fro; eyes painful, reddened, intolerant of light, wild and rolling; pupils contracted; sparks and flames before the eyes; hearing acute and sensitive, with roaring and tinkling sounds before the ears; ace hot and red, although at times moist and sticky. In his

clear moments he complained of confusion in the head; of frightful, fixed, burning, aching and piercing pains therein; he had fits of sneezing and of bleeding from the nose; his lips were red, hot and dry; tongue red and covered with a little tough mucus; throat contracted, with urging to swallow; disgust for food; yellow and slimy vomits; hiccough; constipation; red and hot urine; breathing anxious, sobbing and interrupted; voice hoarse and speaking difficult; pulse quick, hard and spasmodic; skin dry, hot, red and tense.

Treatment.—Bellad. 30, 1 drop; followed by great improvement in twelve hours; on the seventh day of the disease the patient was able to leave his bed for a short time. One dose of Bryon. completed the cure.—SCHUBERT.

CASE 49.—A servant girl, aged 28, after suffering with headache for eight days, was attacked with the following:

Symptoms.—Head hot; violent pain in the forehead as if the blood were violently forced into it; protrusion of the eyes; frequent vomiting of greenish fluid, excited by every movement of the head, and only abating when she was lying quietly on her back; pulse full and slow; constipation.

Treatment.—Nux-vom. 3, was given without benefit; on the next day the symptoms increased and unconsciousness with quiet delirium sat in. Bellad. 1, every two hours, was followed by gradual and steady recovery at the end of seven days.—ROTHANSL.

CASE 50.—A man aged 30, was attacked after taking cold with fever, signs of inflammation of the brain, &c.; after bleeding blistering and leeching, he was left with the following:

Symptoms.—Violent fury, he sprang up, broke the windows, and had to be bound.

Treatment.—Bellad. 18, every quarter of an hour; followed by improvement in a few hours; he was entirely restored at the end of eight days.—IVANOVICH.

CASE 51.—A man, aged 40, was taken with signs of arachnitis after an attack of erysipelas of the face.

Symptoms.—His eyes stood wide open, and were dull; the pupils dilated; nose dry; tongue with a whitish yellow coating;

thirst moderate; constipation for thirty-six hours; urine light yellow and clear; breathing irregular, at times quick, at others slow, now deep and anxious, and then scarcely perceptible; pulse contracted and small, but quick and hard; at times he could speak rationally, but always hastily; at others he would stare horribly at one place where he seemed to see some frightful object, then would spring up from the bed, strike around him and attempt to escape, followed by attacks of trembling and ability to speak quietly and rationally again.

Treatment.—Bellad. 3, was followed by an aggravation for one hour, and then immediately by improvement; on the second day after the use of Bellad., Cocculus 6, was given on account of the presence of pressing headache, noises in the ears, irritable, sensitive and vexatious disposition. In two days more he was entirely restored.—RAU.

CASE 52.—Mrs. S., aged 67; particularly liable to head attacks, for which she has been repeatedly cupped, leeched and blistered.

Symptoms.—Her head has not been right for the last week, and for three days past it has grown much worse; is now confined to bed, complaining of a throbbing and hard aching pain right through the head, from back to front; light and noise distract her; she can get no sleep, and feels as if she would lose her senses; sees everything double; her forehead and top of head are burning hot to the hand; pulse hard, full and 100; she is very thirsty; tongue foul, but moist; she had a shivering fit the day before and then vomited.

Treatment.—She had taken aperient and other medicines and used cold applications to the head without benefit. Aconite 3, one dose, to be repeated in four hours and then followed by Bellad. 3, every four hours; on the next day she was much better, had no headache, her forehead was cool, she could bear light without inconvenience, pulse soft and only 65, no nausea. She continued the use of Bellad. and on the third day took Pulsat. 6, and Sulphur 12, for some pain in the stomach and slight confusion of the head.—YELDHAM.

REVIEW.—Of RÜCKERT'S 37 cases, 33 were children, viz.: 15 boys and 11 girls from the age of 13 weeks to 7 years; and

4 were adults, viz.: 3 males and 1 female from the age of 28 to 40 years.

As *causes* of the disease we find: taking cold in 2 cases; suppressed measles in 1 instance; sun-stroke in 3 cases; during measles in 1 case; after measles in 2 cases; during the desquamation of scarlet fever in 3 cases.

The above cases prove incontestibly that Bellad. has proved useful not only in the first but also in the *second* stage of hydrocephalus; it has frequently removed redness and heat of the face, throbbing of the carotids, squinting, and also involuntary urination.

The inflammation in two of the adult cases had reached a great height.

Dose.—In 29 cases:

The *Tincture* was given in 3; viz.: 15 drops in solution in 1 case; ½ and 1 drop doses each in 1 case.

The 1st *dilution* in 4 cases, 3 times in solution.
" 2d " " 2 " once " "
" 3d " " 5 " twice " " and twice in drop doses.

The 6th, 12th and 18th each in 1 case.
" 24th dilution in 2 cases.
" 30th " " 9 " 5 times in single doses and 4 " " solution.
" 400th " " 1 "

Hence the doses varied from the strong tincture through all the dilutions to the highest potencies, and generally with satisfactory results; as aggravations only occurred in two instances from the use of the 3d dilution. Lobethal even prefers the pure tincture in solution to the higher dilutions.

In these 37 cases, Bellad. effected the cure alone in 21; in 6 instances, Aconite was given with advantage in alternation every half, or two hours; Tart.-emet. was given in 1 case after Bellad. to remove drowsiness; in 1 case Sulphur was given between two doses of Bellad; and Cocculus in 1 case to remove a remaining peculiarly irritable state of mind.

In the first stage of dropsy of the brain Belladonna generally removed all danger in twenty-four hours; in 5 cases, however,

from two to six days were required. In the second stage, three, four, five or even fourteen days were required, and in one case even four weeks. In adults from five to eight days were necessary.

BRYONIA-ALBA.

The root which is the only part used in medicine bears a sufficient resemblance to a thick turnip to have given rise to very alarming mistakes; hence it has received the common name Devil's turnip. Some French peasants use it fresh as a purgative. Allopathic physicians look upon it as a drastic purgative and as a substitute for Colocynth, Elaterium, &c. Towards the end of the last century, Dr. DE MONTGAMY fancied that Bryonia contained all the therapeutic properties of Ipecac. and proposed its substitution. In all probability it is very similar in its action to Colchicum, Helleborus-niger, and Veratrum-album. At least it acts decidedly upon the stomach, liver and bowels, also upon the serous and fibrous tissues, and probably upon the kidneys.

It has principally been used against rheumatism; mild typhus fever, which commences with pains in the limbs and bones; against inflammatory swelling of the joints, œdema of the legs and pleurisy; the ancients often employed it internally against dropsy, and more particularly in hydrothorax, of which it must have effected many cures. DE MONTGAMY says he has frequently cured bilious fevers, vomiting, colic, diarrhœa and dysentery with it; hence TESTE terms it an emetic which cures vomiting and a drastic which stops diarrhœa and colic. HAHNEMANN probably got the hint for its use against pleurisy, from the ancient use of it against hydrothorax. KASPAR says it is homœopathic to infiltrations into the cellular tissue and serous effusions into the serous cavities; but not to plastic and fibrinous exudations. In dropsy of the head, chest, &c., if small doses do not suffice, it may be allowable to use it in large doses after the manner of the ancients in these diseases, in fact, so as to produce a decided action upon the liver, bowels and kidneys.—PETERS.

According to the Oestreichische Zeitschrift, the pathological

appearances produced by Bryonia, together with the symptomatic phenomena, point to congestion and inflammation of the brain.

According to KREUSSLER, Bryonia is indicated when there is great restlessness, tossing about in bed, especially at night, troublesome and frightful dreams, extremely irritable state of mind, heat of the head, greater redness of the cheeks than of the rest of the face, violent and piercing pains in the head, nausea and constipation. He prefers the 12th or 18th dilutions, repeated twice a day.

According to WAHLE it often happens that Aconite and Belladonna, even when given in the first stage, will not prevent effusion and exudation. Then Bryonia will often effect wonders when the face is very red or almost mahogany colored, the eyes rolling about, at times closed and at others wide open, the lips dry, tongue dry and brownish yellow, abdomen distended, bowels constipated, urine suppressed or sharp and burning, skin of the whole body dry and hot, breathing quick, anxious and groaning, thirst excessive and urgent.

He prefers a few globules of the 30th dilution. If Bryonia be given too late, which may easily happen, as the first occurrence of effusion is often overlooked, so that a cure is not effected in twelve or twenty-four hours, then some other remedy must be resorted to.

CASE 53.—A powerful man after lying drunken in the snow for six hours, had the following:

Symptoms.—Heat and redness of the head and face; great thirst, chilliness, constant inclination to sleep, starting up in affright, screaming out, delirium, complains of frightful images before his sight, frightful dreams, cold sweat on the forehead, pains in the head and limbs.

Treatment.—Tinct.-Bryonia in one drop doses; followed by an aggravation in two hours; after this he drank water freely, broke out into a profuse and offensive perspiration, so that he had to change his shirt five times in fifteen hours, and was completely restored in several days.—SCHULER.

CASE 54.—A youth, aged 18, had suffered with a discharge from the ear, which became suppressed by cold.

Symptoms.—Violent piercing and insupportable pains darting from one ear to the other through the head; high fever, intolerance of light with very moveable pupils, sleeplessness or starting up from slumber, violent cough with pain in the forehead; constipation.

Treatment.—Bryonia 2, one-sixth of a drop every two hours; at the end of twenty-four hours the discharge from the ear had returned, he had profuse perspiration especially upon the head, the pain and fever were but slight, the skin only moderately warm, thirst not urgent, but he was restless, tossed about, thought he was going to die, slumbered a good deal, and had an involuntary discharge of mucus from the bowels. *Hyosciamus* 2d dilution, followed by the 1st, removed all danger in three days, and the patient was well in six.—SEGIN.

CASE 55.—A man, aged 37, of nervous-venous constitution and afflicted with piles, had had inflammation of the brain three years before, and was attacked with acute arachnitis fourteen days after the suppression of the hæmorrhoidal flow.

Symptoms.—Restless sleep, typhoid delirium with spasmodic twitchings of the fingers, constant thirst, redness of the face, heat of the head, jerking of the hands, contraction of the abdomen, with sensitiveness to pressure, profuse perspiration, pulse large soft and quick, 100 per minute; if spoken to sharply he started up, answered yes or no in broken tones, then fell into a slumber again, but complained of violent pains in the head, his eyes closed spasmodically, pupils were contracted, tongue moist and broad.

Treatment.—Bellad. 4, one drop every two hours; in two days there was some improvement, he could speak more connectedly, his urine commenced to deposit a sediment, but his pulse remained frequent and quick and he soon relapsed; violent drawing and beating pains shot from one temple to the other, and his pulse became quicker, smaller and harder. *Bryonia* 2, was then given, one drop every two hours the first day, every three hours on the second, and night and morning on the third day, with progressive improvement; the patient only complained of a sense of fluctuation in the head, with slight dizzi-

ness when he sat up, and some pain in the right temple. A fit of vexation caused a fresh relapse which was quickly cured by Bellad. 4, one drop every two hours.—NOACK.

REVIEW.—The above 3 cases all occurred in adult males; 2 cases were in the first stage, and in the other the presence of effusion was feared. In every case Bryonia was the decisive remedy; in one instance it effected a cure alone; in one case Hyosciamus had to be used; and in the other, Bellad. had been used with only transient benefit.

Taking cold was the exciting cause in two cases; while suppression of an ear and hæmorrhoidal discharge complicated the others.

WAHLE'S exact indications for the use of Bryonia are very important; he lays stress upon the presence of a red, almost mahogany-color of the face, while KREUSSLER prefers redness of the cheeks, rather than of the whole face as an indication; the violent pains from the ears and temples through the head were well marked in one case.

DOSE.—The curative doses were the 1st and 2d dilutions; although KREUSSLER prefers the 12th or 18th dilution, and WAHLE the 30th, from notional and theoretical grounds.

CUPRUM.

Cuprum is homœopathic when there is a febrile-inflammatory affection, attended with quite severe pain in the forehead, with paleness and sunkenness of the face, warmth and dryness of the skin and some quickness of the pulse.

Also when there is a remitting or mild typhoid-like form of fever, with great weakness and lassitude of the limbs, vertigo, heaviness in the head and headache, pains in the stomach and bowels and constipation. Also, when the patient is so dizzy that he cannot sit up, with occasional headache, restless sleep disturbed by dreams, slight delirium, or constant slumber, which may increase to perfect coma; or there may be entire sleeplessness, with paleness of the face, with expression of extreme prostration or entire stupidity, the eyes being sunken and dull, and the pupils dilated. Or there may be a sensation of utter

exhaustion and lassitude, which may be increased to the point of fainting, from slight exertion. The tongue may be red at the edges, or red, dry and rough with enlargement of the papillæ; the thirst great, appetite extinct, with disgust for food, skin warm and moist; pulse quick; urine turbid and jumentous. If these symptoms pass off, vertigo and confusion of the head will remain, with long-continued and obstinate weakness and lassitude.

When there is frequent and violent vomiting, or persistent nausea. The pulse may be full, hard and frequent, or weak and slow.

In almost all copper-cases there will be headache, at times violent and generally seated in the forehead and vertex; this headache may abate in a few days to return again. In the milder cases there will only be aching and heaviness in the head, with decided and obstinate dizziness, and a certain amount of stupefaction. In the majority of cases the patient will lie still and apathetic, with dull and unexpressive eyes, stupid and relaxed expression of countenance and great inclination to slumber, but the sleep will be disturbed by dreams, restless and not refreshing. In some there will be a well-marked soporose condition; in others, entire sleeplessness for three or four days, attended with a feeling of internal restlessness and anxiety. Actual delirium occurred only 7 times out of 38, and generally was of the quiet kind, interrupted by mutterings and occasional groans. In one case furious delirium was present. In all cases loud speaking to them would break up their delirium, but they were obliged to collect themselves for a long time before they could answer questions.

There may be darkness or flimmering and sparks before the eyes; the pupils are generally and widely dilated, but not insensible to light; but when the congestion to the head is very great the pupils may be contracted.

In the *ears* there may be roaring and tinkling in many cases, and long-continued deafness.—LANGENBECK.

Cuprum is supposed to be peculiarly homœopathic when there is vomiting of greenish substances, followed by copious, green, offensive and liquid stools. Hence in the brain-affections which follow cholera infantum.

It proved homœopathic in one case in which there was colic and anxiety, great rigidity of the body, coldness of the hands, swelling and redness of the face with great drops of perspiration upon it, eyes fixed and dull, tongue swollen and stiff, pulse full and hard, breathing short and heavy, followed by oppression of the chest, throbbing and roaring in the head, surprising dulness of the intellect, so that everything which the patient said was erroneous.

It proved homœopathic to severe pain in the stomach, followed by violent convulsions, especially affecting the abdomen, arms and legs, attended with frightful and violent cries, or howling or croaking, also with disturbance of the intellect, appearance of fright and attempts to escape; the eyes were brilliant and seemed as if they would start out of the head. Also to severe vomiting, violent cramps in both of the great toes which were drawn tetanically towards the soles of the feet, with excessive pain.

According to CHRISTISON and ORFILA it is homœopathic to insensibility, almost always to convulsions, to rigidity of the body and even tetanus; also to violent convulsions and insensibility. According to BLAKE, however, the salts of copper when injected into the blood-vessels act with peculiar force in exhausting muscular irritability and paralyzing the heart; the force of the heart's contractions are speedily reduced, allowing of distension of the heart from loss of contractility. It is also homœopathic to vomiting, difficulty of breathing and stiffness of the limbs. It is peculiarly homœopathic to violent headache, vomiting, cutting pains in the bowels, followed by cramps in the legs, and pains in the thighs, especially if associated with bilious derangement and jaundice; also to severe headache, with great prostration of strength.

It is indicated when there is insensibility, with the jaws locked, muscles rigid and frequently convulsed, breathing interrupted and pulse small and slow; or by convulsions and loss of consciousness, followed by extraordinary paralytic weakness of the arms and legs, especially if there be pains the stomach, an eruption over the breast, general shooting pains, thirst, frequent small pulse, vomiting, hiccough and purging.

Copper, or more especially BRASS, is homœopathic to irrita-

tion about the genitals, a vesicular eruption about the hairs on the pubes, with loss of appetite, tendency to vomiting, obstinate constipation, soreness and dryness of the throat and irritation of the nose, and great want of sleep.

Among the pathological lesions it is homœopathic to Jaundice, congestion of the surface of the brain, perforation of the bowels by ulceration; especially of the rectum.—PETERS.

Concerning the adaptation of this remedy in inflammatory diseases of the brain, we find only a general remark, and one case where it had been given and then in frequent alternation with Stramon. and Bellad., so that in regard to Cuprum and its influence little is to be learned; it requires further examination by practitioners.—RÜCKERT.

GENERAL REMARKS.—SCHMID has alluded to a particular kind of affection of the brain, developing itself in children during febrile catarrh, difficult dentition, and eruptive diseases, which finds its remedy in Cuprum-acet. The following are characteristic:

Symptoms.—The little patients have a surly, very irritable temper, or are indifferent and feeble, with restless sleep, tossing about in the same, are sleepy, without being able to sleep; unable to hold their heads up while awake; dryness of the mouth, disgust for food, nausea, vomiting, constipation, scanty urine; chilliness accompanied by heat; heat, generally slight, but at times burning; pulse very changeable, moderately full and irritated, with evening exacerbations; convulsions, gritting of the teeth.

Bell. does not afford relief; the exacerbations may be moderated by Aconite; but Cuprum acet. is the most reliable remedy. —Hyg. 12, 2, 116.

CASE 55.—R., a large-headed, robust boy, 4 years of age, formerly atrophical, was attacked on the evening of the 30th of June, with general convulsions.

Treatment.—Acon. 1, and Bell. 1, aided by sponging the head with cold water. At nine o'clock in the evening he had the following:

Symptoms.—The burning heat existing before sponging with cold water was changed to a moderate temperature of

the skin; pulse quick, hard, almost uncountable. General convulsions of the limbs from time to time; on the left side the spasms were more clonic, on the right more tonic; spasmodic convulsive movements of the muscles of the face; eyes mostly open and staring, but at times closed by the convulsion of the muscles of the face, attended with squinting. The pupils were fully dilated and insensible to light. Lower jaw tightly pressed against the upper one, with gnashing of the teeth. Respiration very heavy, accompanied by rattling in the chest, and intermitting at times for eight to ten seconds, as in the dying. Palsy of the lungs was momentarily expected.

Prescription and Result.—Cuprum-acet. 1, 1 gr. per dose, dry upon the tongue, followed in ten minutes after by Tinct. Stram. 1, and cold applications to the head.

After the second dose of each medicine an intermission of the convulsions was followed by coldness and relaxation of the limbs and apparent cessation of the respiration, so that paralysis of the nerv. vag. seemed imminent. Phosph. Tinct. was then given; some contraction of the pupils was soon observed, and the Phosphor. was continued after the lapse of a quarter of an hour, in alternation with Cuprum and Stram. At twelve o'clock at night there was an important intermission of convulsions, but frightful reaction of the blood-vessels, the face and body became glowing hot and dark red, the carotids throbbed violently, the eyes were decidedly injected and the pupils contracted. The child was conscious and screamed when sprinkled with cold water.

Cupr. S., 2 gr. per dose, in alternation with 10 drops Bell. (in solution.) On the following morning the little patient was sitting up and playing in the bed, his pulse was still 120, but the hardness was diminished, and his eyes yet somewhat staring.—Both remedies were continued till the 3d of July, when the boy was dismissed cured.—SCHWEICKERT.

DIGITALIS-PURP.

This remedy has long enjoyed a high reputation against many dropsical affections, and also in dropsy of the brain. According to WARING it has been found serviceable by WITHERING,

Brown, Whyte, Cheyne and Gölis. The latter however, without appearing to place much faith in its efficacy, advises gr. $\frac{1}{4}$ of the pounded leaves, with gr. $\frac{1}{2}$ of Calomel, every second hour. He gave it, both in the inflammatory stage, and in that of effusion; in the latter, chiefly as a palliative, to moderate the violence of the convulsions. Kleber advises its external application, in combination with Squills to the scalp. Merriman treated cases successfully with Digitalis and Calomel as advised by Gölis. Of 92 cases of dropsy of all kinds collected by Bayle, 65 are said to have been cured by Digitalis, 15 improved and 11 not cured. Withering, of 126 cases, in the last stages of dropsy, cured 48 with Digitalis alone; Ferria of 20 cases, cured 8 perfectly, improved 8 materially, and only failed entirely in 4 cases; Jones of 24 cases cured 15 perfectly, improved 4, and saw no good effects in 5 cases only; in 7 other cases out of 12 of ascites, it acted as a diuretic; also in 6 cases out of 15 of hydrothorax. Hence we may agree with Pereira, who says, of all the remedies for dropsy, none have gained more and few so much celebrity as Digitalis.

We propose next to inquire whether it has been found most useful in inflammatory or dyscratic dropsies. It is a decidedly antipathic remedy to fever and inflammation, as in full doses its most ordinary effects are: nausea or actual vomiting, slow and often irregular pulse, coldness of the limbs, fainting, or a tendency to it, giddiness and confusion of vision. Yet Waring says, experience has shown that although it exercises a powerfully depressing action upon the heart, it possesses little or no power in controlling inflammatory action. Pereira says that in violent and acute inflammation accompanied with great excitement of the general circulation, especially in plethoric subjects, Digitalis is in some cases hurtful; in others it is a trivial and unimportant remedy, and fox-glove if serviceable at all, can only be used successfully after other and more powerful antiphlogistic measures. Again, he says: inflammation of a chronic kind may be going on in one part of the body, to an extent sufficient to produce complete disorganization, and ultimately to cause the death of the patient without the action of the larger arteries or vascular system generally being remarkably increased; in such cases Digitalis is for the most part of little

use. Finally, PEREIRA decrees that as a remedy for inflammation, fox-glove is principally useful in less violent cases, particularly when accompanied with increased frequency of the pulse, and occurring in subjects not able to support copious blood-letting. Still he admits that it has some influence over inflammation of the arachnoid, and is certainly a most valuable agent in arachnitis of children; while its specific influence over the brain would make it a doubtful remedy in phrenitis.

There is one stage of dropsy of the brain in which it is peculiarly homœopathic. In the *second* stage, the pulse becomes slow, labored, intermitting and irregular, but is easily quickened by motion or mental disturbance to double its previous amount of pulsations; in this stage the pulse falls from 120 or 140, to 80, or even as low as 54, and this is the time in which Digitalis is peculiarly homœopathic; if rightly given it may prevent the second quickening of the pulse, or at least prevent it from rising again to 140 or 160, which it is very apt to do. Dr. BAILDON first noticed the effect of posture in ascertaining the real effects of Digitalis on the pulse; when by gradually increased doses, he took it to the extent of gr. vj. in the day, the pulse fell from 110 to 40; when it was actually 40, the erect posture would raise it to 100; when sitting it was 72; and on again lying down it fell to 40. Digitalis acts specifically upon the par-vagum, and the slowness of the breathing and pulse in the second stage of dropsy of the brain, is produced by pressure upon this nerve at the base of the brain.

PEREIRA and HOLLAND have both observed several times in patients affected with a slow, intermittent and otherwise irregular pulse, that Digitalis would produce regularity of pulsation. If it will remove the symptom it may also remove the cause upon which the symptom depends; besides, Digitalis produces absorption and acts profusely upon the kidneys, and hence may remove the slow pulse of hydrocephalus, by producing absorption of the dropsical effusion. It is not advisable to use Digitalis in the first stage, if for no other reason than that given by HOPE, who says in no disease do the symptoms more require to be kept, as far as practicable in a simple, uncomplicated, and intelligible state, and no remedy is so calculated to confuse them as Digitalis. The reduction of the pulse which it occa-

sions cannot be discriminated with any degree of certainty, from that occasioned by the supervention of pressure in the second stage; again, Digitalis is apt to produce vertigo, faintness and nausea, and how, asks Dr. HOPE, are these symptoms artificially excited, to be distinguished from the same results of inflammation and dropsy of the brain? Easily, by not using Digitalis at all, during the first or inflammatory stage; but by giving it boldly and perseveringly in the *second* or dropsical stage. PEREIRA says the quantity of Digitalis that may be given to a patient without destroying life, is much greater than is ordinarily imagined. In one instance he saw 20 drops of the tincture given to an infant laboring under hydrocephalus, three times daily for a fortnight, at the end of which time the little patient was completely recovered without one untoward symptom. I do not propose that Digitalis should always be given in such large doses; but if smaller ones will not suffice, larger ones should be made to do the work, and effect the cures they have accomplished before. It is exceedingly doubtful whether Digitalis can be given usefully during the first or inflammatory stage; WITHERING has correctly observed that it seldom succeeds in dropsical persons of great natural strength, of tense fibre, of warm skin, of florid complexion, or in those with a tight and cordy pulse; on the contrary, he says, experience teaches that if the pulse be feeble or intermitting, the countenance pale, the lips livid, and the skin cold, we may expect the diuretic effects to follow in a kindly manner. In short, when nature or disease brings the pulse and general system into that condition which is most peculiarly apt to be produced by Digitalis, then the other and curative effects of the drug may be expected to follow promptly and from moderate doses.

It is surprising how frequently a symptomatic similarity between the action of a drug and of a disease, affords a hint for the selection of a curative remedy. Thus the principal diseases of the valves of the heart are contraction and patency of the Aortic valves and of the Mitral. The slighter degrees of contraction of the *Aortic* valves have little or no effect upon the pulse, which will remain *firm* and *full* as long as the contraction of the valves is not so great as to prevent the left ventricle from emptying itself; again, Aortic-regurgitation produces a pre-

eminently jerking pulse, for the beat of the artery is short and quick, as if the blood were smartly jerked or shot under the finger. Hence the homœopathist would conclude from the pulse alone, that Digitalis will rarely prove useful in diseases of the *Aortic* valves, and old school experience has already shown that it is rarely useful when the pulse is hard, tight or corded.—But when the *Mitral* valve is contracted, and also when it admits of free regurgitation, the pulse is in various degrees small, weak, irregular, intermitting and unequal, i. e. the pulse resembles that produced by Digitalis. From the pulse alone the homœopathist would conclude that Digitalis ought to prove useful if not curative, in diseases of the Mitral valve. What does experience teach on this point? CORRIGAN was the first to allude to the *injurious* effects of Digitalis in diseases of the *Aortic* valves, while he found the most *favorable* results to follow its use in affections of the *Mitral* valves. In patency, admitting of regurgitation through the *Aortic* valves, the less frequently the heart beats, the greater will be the opportunity for regurgitation, and hence the prolonged employment of Digitalis, so as to lessen the frequency and force of the heart's action, cannot fail to be injurious. On the other hand in contraction of the *Mitral* valve, the lengthened interval between the contractions of the heart, produced by Digitalis, permits the left ventricle to become more fully distended, while it also lessens the frequency of the interruptions to the passage of the blood, and hence the pulse becomes fuller, stronger, and more regular. Again, in patency of the Mitral valve, Digitalis prevents the regurgitation from being so frequently repeated.

Slowness and intermittence of the pulse in the second stage of hydrocephalus, are probably as safe guides for the use of Digitalis as they are in disease of the Mitral valve; at least as Digitalis does not generally exert its absorbent and diuretic action until it has lowered the pulse and reduced the system, it will of course be more apt to produce absorption of the hydrocephalic fluid, when the pulse has already become slow, weak and irregular or intermitting from the effects of disease.—PETERS.

In conclusion, Digitalis has long retained a reputation against scrofulous affections, and hence it may be suitable in scrofulous

meningitis. VOGT says: next to its diuretic action it exerts a decidedly powerful action upon the lymphatic glands and the whole lymphatic system. From its great curative powers against scrofula we can conclude that it fluidizes the lymph, facilitates its circulation, and removes obstructions of it. Next to the vascular, urinary and lymphatic systems it acts especially upon the serous membranes. In the second degree of the action of Digitalis, pains are often felt in the lymphatic glands, and also a very abundant flow of saliva; hence it also acts upon the salivary glands, and perhaps upon the pancreas.—VOGT.

Digitalis may prove to be one of the most homœopathic remedies against *sick*-headache, especially in that variety which is attended with disturbance of the urinary secretion. Even in small doses it causes headache especially in the temples and back of the head; decided disturbance of vision, such as clouds, sparks, flimmering or colors before the eyes, with sensitiveness to light; also paleness and coolness of the skin, weakness of the pulse, general prostration, nausea and vomiting; with a peculiar disturbance of the urinary organs. Many persons, subject to sick-headaches, will have their urine clear and abundant when they are well; when the headaches occur frequently and severely their urine is apt to be thick and dark, like coffee or brandy, with more or less brick-dust, or other sediment. When the headache comes on, the urine will again become clear, and be like spring-water and abundant; when the headache is going off, the urine becomes thick and dark. In another class of headaches the urine acts entirely differently, being scanty and irritating during the headache, and becoming clear and abundant when the headache passes off. In one or both of these forms of headache, Digitalis will prove useful. It would seem that many headaches arise from derangement of the kidneys and retention of urea, or some other effete substance in the blood.—PETERS.

CASE 56.—A little girl, 2 years of age, blond, of delicate constitution, and merry disposition, fell into the second stage of hydrocephalus, with the following:

Symptoms.—Head hot, falling backwards on lifting up the child; sleep-like condition, with half-opened eyes and widely dilated pupils; look staring, with squinting; dulness and rolling

of the eyes; convulsions of the muscles of the face; great thirst, constipation; urine scanty, leaving on the chamber a glossy, glimmer-like deposit; skin, sometimes hot and dry, sometimes cold and covered with sweat; pulse irregular, weak and soft; convulsions of the limbs during sleep; piercing cries.

Treatment.—Bell. 9. in water, four hourly; the first and second day without result, afterwards Digit. 3., also four hourly. The following day improved consciousness, increased flow of urine; soft, slimy stools, followed by green, looser, more slimy passages, preceded each time by crying, drawing up of the legs, screaming and convulsions of the limbs. After three days' use of the Digitalis, Cham. 3. was given, followed by sleep for five or six hours, from which she awoke conscious, with appetite, natural expression, pulse more regular and stronger. Still some Sb. Cham. 3. On the twentieth day of the treatment the recovered child went into the fresh air.—Y. 95.

HELLEBORUS-NIGER.

General Remarks.—According to Vogt and Pereira in small doses it acts as a mild stimulant to the stomach, bowels and abdominal nerves, also quite especially upon the pelvic nerves and those of the rectum and genital organs; in short, it is a powerful alterative remedy for the abdominal nervous system. In somewhat larger doses it increases the secretions from the stomach, and causes the excretion of a larger quantity of fluid bile; it arouses the circulation in the portal system, and in the liver and spleen. It acts less powerfully upon the abdominal lymphatic system, and very little if at all upon the kidneys. Next to its action upon the abdominal nervous system, its effects upon the skin are most decided.

It is much more apt to excite vomiting in large doses than purging, and Emmert found it more apt to excite vomiting when injected into the veins, than any other drug. In excessive doses it causes most violent vomiting and purging.

It is one of the oldest medicines used in the practice of medicine. Thus, about the year 1500 before the Christian era, a certain Melampus, son of Armithaon, a most celebrated augur

and physician, is said to have cured the daughters of Proctus, king of the Argivans, who in consequence of remaining unmarried were seized with an amorous furor and a wandering mania. They were cured by means of Hellebore given in the milk of goats. From this circumstance the great fame of this plant is derived. In the course of time the use of Hellebore became so frequent, that every year a large concourse of patients flocked to Anticyra, where this plant grew in great abundance and perfection, in order to be cured with it of mania, melancholy and other mental affections. At first it was thought to be especially useful in cases with derangement of the pelvic organs, and even in later times it was greatly esteemed by MEAD as an emmenagogue, and is still much valued by some practitioners. He gave two teaspoonsful of the tincture in a glass of warm water, twice a day.

But soon it was conjectured that Black Hellebore possessed the power of carrying off black bile easily and promptly, and hence its use was extended to liver and spleen diseases, and such cases of epilepsy, mania and melancholy as were supposed to proceed from the presence of black bile.

Finally it was regarded as simply an evacuant remedy, and given against dropsy, jaundice, suppressed menses and hæmorrhoids, worms, obstinate eruptions, chronic gout and rheumatism, and fever and ague. And against diseases arising from the suppression of eruptions, or accustomed hæmorrhagies.

HAHNEMANN says: if it is used for a long time it will cause severe headaches and a fever; hence he infers its usefulness against chronic headaches, mental affections, quartan fevers and dropsy, as proven by old school experience, i. e., because a remedy which acts upon the head and causes headache, it may cure mental affections homœopathically; a remedy which simply causes fever, may cure quartan fever homœopathically; and last of all dropsy, because the worst kinds of dropsy are always accompanied by remitting fever—certainly never have such wholesale assumptions been made from such slight premises; yet such overstrained attempts to fasten a homœopathic explanation upon allopathic cures are not at all uncommon with HAHNEMANN.—See Lesser Writings, p. 292.

a. BREDENOLL says; since I have been a homœopathic

physician, (fifteen years,) I have frequently treated patients, suffering with hydroceph. acut., and have cured at least twelve. The principal remedy is and remains Helleb. I never have seen any result from Bryon. and Sulph. if I abandoned Helleb. —N. Arch. 3, 3, 46.

b. WAHLE says; if the first stage of effusion has already begun, and Bryon. was not given at the proper time, so as to effect a cure in the course of twelve to twenty-four hours, and there appeared during an intermission of the fever, the well-known symptoms of effusion, such as heavy breathing, unconsciousness, trembling, and putting of the hands to the head, squinting, indifference to light, chewing motions of the mouth, sopor, then one dose of Helleb.-nig. 30. will often remove all danger in the course of a few hours.—Arch. 15, 2, 23.

CASE 57.—A boy, 2½ years of age, was treated for inflammation of the brain, for fourteen days with Mercur., Moschus, leeches, &c. On the 31st of July he was in the following condition:

Symptoms.—He had lain for six days in a soporific state; the eyes could only be half-opened; eye-lids were stuck together and dry; the eye-balls reddish, glassy and turned upwards; the pupils dilated; no sign of consciousness; face pale and disfigured; head hanging down behind; pulse, weak, quick and irregular.

Prescription.—Hell. 3. a few drops in a wine-glass of water, a teaspoonful to be taken every half-hour.

On the 2d of August there were signs of consciousness; the eyes were less fixed; he commenced to take food; on the 3d of August, state improving in general, but there were frequent convulsions of the right arm, convulsive pain in the limbs, and sudden starting up from sleep. Hyosc. 3. and Helleb. in alternation till the 8th, with continual improvement. Then he was conscious and without fever, still the convulsive movements had abated but little, saliva accumulated in the mouth, his speech was indistinct, voice groaning, he coughed at night, with severe vomiting. Bell. was given morning and evening, one drop per dose for four days, when the recovery was complete.—ELWERT.

CASE 58.—A little girl, 2½ years of age, sickened with all the signs of disease of the brain, and the following symptoms were present on the sixteenth day of her illness:

Symptoms.—She has been lying for a week upon her back, apparently in slumber, her eyes only half-shut, pupils contracted, cornea and albuginea dim as if covered with dust; in the corners of the lids dry mucus, squinting, eyes turned inwards, sunken and surrounded by blue circles; face pale and thin, nose pinched; nostrils covered with sordes; lips chapped and dry; body emaciated, covered with loose, harsh skin. The pit of the stomach drawn in, legs extended, the legs were drawn up to the thighs at every attempt to change the posture.—Groaning; painful, lamentable crying; face distorted by pain; the head fell back involuntarily; eyes wide opened, with enlarged pupils; oscillationof the iris; access to light, speaking and calling did not arouse the patient. He drank largely, biting violently at the spoon, without arousing from his unconscious state; distortion of the face, chewing with the mouth; grasped with the hands at his head, had cramps in the dorsal muscles, gritting of the teeth, constipation, involuntary urination, partial sweat on the scalp; pulse quick, weak and intermitting.

Prescription.—Tinct. Helleb.-nig. Gtt. ij., to be taken every two hours, day and night, for six days, finally every three to six hours.

On the third day the brilliancy of the eyes had returned, he cried out seldom, gave attention to objects, and from the sixth day of the treatment, the improvement advanced so rapidly that no other remedy was required.—Allg. Hom. Ztg. 19, 39.—KNORRE.

CASE 59.—A boy, aged 6 years, had been drooping for some time, and finally got all the symptoms of brain-disease, attended with gastric derangement; he lay doubled up in bed, with his knees drawn up to his stomach, and could not bear his abdomen to be touched; he was very drowsy and heavy, and when not disturbed, remained constantly in a stupor with half-closed eyes and open mouth; when roused, and also at other times, he started up and screamed out with loud piercing cries; his features were sharp and sunken; his mouth and nostrils sore, dry and black; his tongue dry and parched, also thickly

coated brown and yellow, the edges and papillæ being of a deep red color; the skin of the whole body, but more particularly of the head and bowels, was dry and hot; he was thirsty and had no appetite; bowels loose and evacuations unhealthy; pulse 125, and hard; he was also harassed by a short, hacking cough.

Treatment.—Arsenicum 6., every four hours; at the end of two days he was much the same, except that the tongue appeared somewhat clearer, and he was not so thirsty; continue Arsen. 6., every four hours; in three days more there were only some shades of amendment. Then Hellebore 6. was given every four hours, and in two days there was a decided improvement, and in a few days more he was perfectly restored.—YELDHAM.

CASE 60.—A boy, aged 3 years, was taken sick three or four days ago, with disordered bowels, and soon fell into a drowsy and heavy state, in which he hangs back on his mother's arm, shewing the greatest repugnance to being moved or disturbed; his brow was knit and frowning; his eye-lids drooping, pupils contracted, eyes dull and unexpressive; his head as well as body generally hot and dry; breathing short and quick, pulse 160 and throbbing; was very thirsty, could not bear the least noise and avoided the light; his tongue was white and thickly coated; bowels loose; he was exceedingly weak, and had commenced to emaciate.

Treatment.—Aconite 12. and Bellad. 12. in alternation every four hours; the next night he was quite delirious, but much improved in the morning, his skin was cool, pulse only 100, thirst less, eyes still heavy and frowning; omit Acon. and continue Bellad.; on the next day there was an increase of stupor, but his skin was still cool and pulse laboring; gave Hellebore 6. every four hours with marked improvement in twenty-four hours and rapid recovery.—YELDHAM.

CASE 61.—A girl, aged 7, had been failing for some time; bowels relaxed and passages unhealthy.

Treatment.—Mercurius 6., three times a day; in two days was considerably worse, stupid, heavy and lethargic; started and screamed; her head was hot, and she was feverish and thirsty; her tongue coated brown and dry. Bellad. 6., every

four hours; at the end of three days more she was still worse, was perfectly lethargic and unconscious of everything; she screamed and started terribly, and rolled her head; her lips, tongue and teeth were black and dry, and covered with a thick, hard and offensive matter; pulse very rapid, and skin and head very hot. Then took Hellebore 12. and Rhus. 12., every four hours in alternation, with decided improvement at the end of two days, when her lips and tongue were moist and cleaning, mind more quiet and intelligent, no more screaming. The medicines were continued for five days more, when she was quite restored.

HYOSCIAMUS.

The most marked effects observed by GREDING were:

1. *Perspiration.* Seven patients out of forty had a profuse dripping perspiration on the first night; and two-thirds of all the others had more or less sweat; they perspired not only in summer, but also in the fall and winter; the perspirations were *sour* at times.

2. *Sleep.* A quiet, refreshing and deep sleep, generally attended with breaking out of the perspiration; many patients slept the first night, but more, viz.: twenty out of forty, slept better afterwards.

3. Happiness of mind, activity of body, and greater clearness of intellect; fourteen out of forty patients experienced the former, and nine the latter.

4. Dulness and heaviness of the head occurred in four cases.

5. Headache in fifteen cases.

6. Dizziness in eight cases.

7. Torpor of mind in three cases.

8. Eruptions occurred in five cases, viz.: brown spots, or liver-spots, small pustules, boils, and also swelling of the left parotid gland.

9. Profuse urination occurred in three cases, on the first day; and finally in at least one-third of all the cases.

10. Diarrhœa more or less profuse and continuous occurred in twenty-three cases; with expulsion of worms in three cases;

with vomiting of bile and mucus in ten cases; with colic and rumbling in six cases; with nausea in five cases. Constipation only took place in two cases, and then only in a slight degree.

11. Menstruation was brought on, or increased in twelve cases; in one case it was brought on after a suppression of five months.

12. Salivation occurred in one case.

13. Profuse catarrh in one case.

14. Rheumatic pains in seven cases.

15. Dry, convulsive cough in two cases.

16. Hiccough in three cases, in one with involuntary urination.

In one case, in an adult woman, an overdose of the Root produced, slight and then increased stupefaction; flimmering before the eyes, brilliancy of the eyes, double vision; considerable dilatation of the pupils; dimness of sight; dizziness; great dryness of the mouth; trembling of the limbs and staggering; small, scarcely perceptible, frequently intermitting and moderately slow pulse.

In a girl, aged 4 years, a large quantity of unripe seeds, produced unsteadiness of gait, small, white blisters on the lips, and flushed face; at the end of three hours the face was very red, the eyes injected, the pupils extremely dilated and insensible to light, the tongue coated, pulse small and moderately frequent; heart beating violently and irregularly; there was entire loss of consciousness; frequent groaning; grasping about, with outstretched fingers, as if something had to be seized suddenly; frightful gritting of the teeth; frequent jerking of the hands and feet; constant incomprehensible babbling; skin almost natural; abdomen soft.

In a boy, aged 3 years, the seeds caused him to fall down senseless upon the floor; he thrashed around him; frothed at the mouth; his face was much reddened; and he had alternate convulsive movements of the face and limbs.

In a girl, aged 6, the seeds caused paleness of the face without heat of the head; great dilatation of the pupils; smallness and quickness of the pulse; throbbing of the heart; coldness of

the hands and feet; slight convulsions of the limbs; squinting; gritting of the teeth; and unconsciousness.

In a girl, aged 6, the seeds caused: heat of the head and whole body; redness and bloating of the face; fulness, without quickness of the pulse; violent and irregular action of the heart; protrusion with great redness of the eyes and much dilatation of the pupils; the most happy delirium, so that she sang and spoke and babbled constantly, but very hastily and indistinctly; but she became very violent, and struck around her whenever she was spoken to loudly or taken hold of.

In an adult, three ounces of the seeds, made the face bluish; the eyes red, wild and sparkling; the veins of the neck and limbs, but especially of the face, much distended; the whole body was convulsed; frequently returning subsultus; and such a furious delirium that no one could hold him. During the intermissions the patient was occupied in trying to catch flies which seemed to be flying about, or in picking shreds out of his quilt. Afterwards he seemed much exhausted and breathed like one in an apoplexy, from which he was aroused by still more violent convulsions; the pulse was small, quick, contracted and distinctly intermitting; tongue dry and clean; hypogastric region much distended and very painful; urine very scanty; there was such excessive itching that he expended his little strength in scratching himself until the blood came; invincible horror for all liquids; afterwards perspiration sat in very profusely and lasted for two whole days, over the whole body, but especially on the legs, and a pimply eruption broke out upon the thighs, both before and behind, from the hips down to the knees; the pimples were large, red and confluent, like those of small-pox, but did not contain any fluid. His sight remained very dim for some time.—Frank.

A coachman, from the herb, experienced confusion of the head, and such stiffness of the arms and legs that he could scarcely stand, and finally fell down; his eyes seemed inflamed for a long time afterwards.—Frank.

Schneller from four grain doses of Extract, experienced: mist before the eyes and weakness of sight; dryness of mouth;

yellow coated tongue; great distension of abdomen, with inclination to breathe deep; sour eructations; scanty stools; rather slow pulse; also left frontal headache, with ambliopia, frequent inclination to yawn and sleepiness, with evening nausea. Some of the doses were not followed by head-symptoms, but merely by frequent inclination to sneeze, with the feeling as if a catarrh of the head would set in; also frequent sour eructations, some little constipation, and good sleep.

In other experiments he had: tickling and burning in the throat, with increased secretion of mucus, dryness of the mouth, white tongue, hoarseness, loss of appetite, and some colic; also peculiar drawing and rending pains in the joints, especially in the wrists and knees.

Five grain doses caused: thick coating of the tongue, insipid taste, offensive breath, eruption of small boils upon the face, dimness of vision and redness of the eyes. Eleven grain doses caused: vertigo, gauze before the eyes, headache on the right side of the forehead, prickling feeling in the arms, followed by sticky perspiration, with heat, redness and turgor of the face. At other times he experienced: dryness of the nostrils, pain at the root of the nose, and excretion of a very little mucus mixed with blood, &c.—FRANK.

In an adult soldier, the young shoots caused some burning in the throat, stupefaction, and a dropsical swelling of the arms and hands.

Two other soldiers experienced: very violent dizziness, and they finally fell down as if deeply intoxicated; their eyes were wild, pupils much dilated, expression fixed and stupid, respiration difficult, pulse small and intermitting; loss of voice, lock-jaw, risus sardonicus, loss of sensation, typhomania, coldness of the limbs, paralysis of the legs, carphologia and convulsions of the arms. The patient who vomited least, had mania with delirium, but without fury, although it was difficult to hold him, when he sought to escape.

A girl, aged 4½ years, ate one root, and seemed as if intoxicated; she was awake, but without consciousness, did not answer questions, but looked around the room as if seeking something,

made frequent, but not convulsive motions with the hands and feet; if she attempted to take hold of anything she grasped to one side of it; her eyes were wide open, pupils dilated, pulse natural, and face reddened.—FRANK.

Four children, from 4 to 8 years of age, ate of the leaves: They began to stagger, then fell down in convulsions; their faces were bloated, skin dry, pupils excessively dilated, eyes turned upwards and inwards. In one child the abdomen was so much distended that it seemed as if it would burst, but without pain; the tongue was stretched far out of its mouth, turned up, and occasionally thrown spasmodically against the nose. In the two youngest, such violent convulsive movements sat in at times that a strong man could scarcely prevent them from injuring themselves; when free from convulsions they spoke much, very hastily, and unconnectedly. The two oldest were affected quite differently; they lay quite quietly in a perfectly stupid and unconscious state. None of them seemed to be in pain; all seemed comfortable, and one was occasionally merry and silly.—FRANK.

Two girls, aged 5 years, ate several capsules, and were attacked with trembling of the limbs, anxiety, restlessness and confusion of words and actions; in six or eight hours they were talking incessantly and confusedly, they laughed and sang at times, did not know their relatives, had frequent spasms of the facial muscles, especially if one attempted to hold them or take anything out of their hands, when they became violent and attempted to bite, pinch and scratch; they seemed very strong in their hands and feet, and at times attempted to dance; they gritted their teeth, and had a spasmodic stretching out of their tongues, with a peculiar trembling motion of it; their eyes were brilliant and rolled about unsteadily, and were reddened; the pupils exceedingly dilated and insensible to light; pulse almost extinct, small, and very quick.—FRANK.

CASE 62.—A man, aged 24 years, healthy and strong, got sick after a severe chill. On the second day the malady was the following:

Symptoms.—He lay senseless with closed eyes, did not open them when spoken to; his mouth could be opened with diffi-

culty; tongue, covered with a white, foamy slime; he dreamed about business affairs, animating his servant to work; he sang unintelligible songs; murmured, laughed and then became quiet again, started often, worked with his hands, as if he intended to prick on the ceiling; pupils enlarged, eyes dull, face red, skin dry and parched, breathing quick and anxious; pulse regular, but full, abdomen somewhat contracted, but he did not complain of pain if touched and pressed.

Prescription.—Hyosc. 6., one drop per dose, in half an hour after, slept for four hours, passed urine involuntarily; seven hours after, awaked with consciousness. On the following day, some signs of inflammation of the lungs were soon removed by Arnica.—MOSSBAUER.

CASE 63.—It was useful in an affection of the brain, attended with convulsions of the whole left side of the face and body; the right arm and the right leg constantly affected, although not spasmodically, while the limbs of the left side, without being paralysed, lay quite still. Ipecac. was of no use, but Hyosc. effected a speedy cure, and caused a quiet sleep.—GROSS, Jr.

REVIEW.—The presence of redness of the face, delirium, picking at the bed-clothes, fright, convulsions, are indications for the use of this remedy.

IODINE AND HYDRIODATE OF POTASH.

Iodine acts principally upon the absorbent system, and the particles absorbed are quickly ejected through the kidneys, as the urine is generally much increased in quantity; some persons experience this latter effect so instantaneously that Iodine has been detected in the urine almost immediately after each dose has been taken. This excessive absorption and drain from the system may lead to great emaciation, or it may excite an increased demand for food so that one of the first and most important effects of this remedy may be a great increase of appetite, which will enable us with ease to invigorate the constitution by wholesome and sufficient nourishment. Again, although it is well-known to all practical men that Iodine acts as a diuretic, it

is not equally known that the Iodine-urine contains large quantities of urea. Now, urea is the product of the decomposition of the albuminous tissues, and as it has been clearly shown by chemical analysis that tubercle is composed chiefly of albumen and caseine, we can understand how Iodine acts by carrying a large quantity of albumen out of the system, thus retarding the growth and promoting the absorption of tuberculous matter.—GLOVER. We have already seen that Hepar.-sulphur diminishes the quantity of albumen in the blood; it might be advisable to put a tuberculous subject upon alternate courses of Hepar.-sulph. and Iodine; the one to diminish the quantity, and the other to expel the excess of albumen from the system.

WARING says: In *tubercular meningitis* or *acute hydrocephalus* Iodine has been used with benefit. Drs. CHRISTIE and WONINGER relate two cases which had reached the paralytic stage, but which recovered under the external and internal use of Iodine. Dr. BENNETT has derived decided benefit from Iodine and its preparations in this disease; and Dr. WILLSHIRE bears similar testimony; he advises the use of Iodine externally and internally in the early stages of the disease, before there is much evidence of congestion and inflammation; he applies the Iodine-ointment to the shaven scalp, and gives internally, gr. $\frac{1}{10}$ of Iodine and gr. iij. of Potass.-iod. in solution, every three hours; this, aided by turpentine enemas will be found in most cases a palliative, and in some a curative mode of treatment. Dr. RILLIET advises the use of Iodine frictions to the shaven scalp in the second and third stages of hydrocephalus.

ROWLAND HOSKINS relates a very aggravated and apparently hopeless case which yielded to the Iodide of Potassium in half-grain doses, every four hours; but Scammony was given at the same time as a purgative. Another case illustrative of the efficacy of this salt, is related by Dr. GUEROUD. Dr. COPELAND also states that he has prescribed it in small doses with evident advantage.

CASE 64.—A child, aged $2\frac{1}{2}$ years, was attacked with fever and vomiting, followed on the third day by convulsions, and all the signs of dropsy of the brain; on the fourth day the eyes were open, squinting and dim; the pupils much dilated; there

was unconsciousness with incessant screeching, without weeping; entire blindness; the eyes were moist, the edge of the lower lid relaxed and inverted, (entropium); the little patient lay on its back, with its head pressed back into the pillow; when it was raised up its head fell back hopelessly; there was entire paralysis of the right limbs, with partial palsy of the left; frequent, involuntary and automatic motions were made with the left arm and leg; drinks passed over the clean and dry tongue into the windpipe and excited spasmodic coughing; the urine was scanty; the cheeks which had been pale yesterday were red to-day; the pulse which had been slow and irregular yesterday was very quick to-day; the whole body was in a dripping perspiration, notwithstanding that ice was applied to the head. The last febrile reaction had taken place previous to dissolution.

Treatment.—Kali-hydr. 1 drachm in 2 oz. of water, 30 drops per dose, every hour; notwithstanding the difficulty of swallowing, the whole of the above medicine was given in less than twenty-four hours and the prescription repeated, without alteration of the symptoms except an increase of the dryness of the mouth and thirst; but on the tenth day of the disease, and the second day of this treatment, the first traces of improvement were observed in commencing contraction of the pupils; on the seventh day consciousness was restored, there was regular movement of the pupils, natural position of the eyes, the countenance was expressive, the little patient began to move the left hand and arm, and two days afterwards motion was also restored to the right side; great appetite set in, and many small *boils* broke out on the face and neck. Finally this critical eruption of boils became a perfect torture to the child, for at least one hundred large and small ones appeared first and last upon the head, back, neck, face and chest; shortly after the pimples appeared, they quickly changed without much redness or inflammation into larger or smaller abscesses, some of which attained the size of a hickory-nut and then burst.

At the end of four weeks the child was perfectly well of disease and eruption, after using about ten drachms of Iodide of Potash in the course of eleven days.—Frank's Magazine, Dr. Roeser.

CASE 65.—A case of hydrocephalus progressed notwith-

standing the most active antiphlogistic and derivative treatment into the second stage, but after the use of half an oz. Iodide of Potash in the course of three days, consciousness had returned, the pulse was no longer irregular and intermitting, but still frequent; a perfect cure was effected in six days by smaller quantities—about two drachms more. Tartar-emetic ointment had also been applied to the nape of the neck.—Dr. Veit.

CASE 66.—A girl, aged 6 years, after eight days of sickness, lay in a deep stupor, from which she occasionally started up with screaming; the pupils were dilated, one considerably more than the other; the eyes were insensible to light, with squinting; she could be rendered conscious for a short time by shaking and loud talking; she gritted her teeth in her sleep; the pulse was quick and irregular; she could still move her limbs, hold up her head, and swallow.

Treatment.—Kali-hydriod. was used without aid from any other medicine; at the end of two days and after taking drachms ij., all dangerous symptoms had disappeared, the position of the eyes was natural, the pupils normal, and stools regular. But great redness of the cheeks and strong pulsation of the carotids set in, calling for the omission of Kali-hydriod. and the use of Calomel, leeches and cold applications to the head; on the next day this congestive and febrile paroxysm had subsided, and the face was again pale, but the stupor sat in again, and the pupils became dilated and sluggish. Kali-hydriod. was resumed, and in five days more perfect recovery had taken place.—Dr. Veit.

CASE 67.—A boy, aged 3½ years, of strong constitution and active temperament, but who had frequently suffered with crusta-serpiginosa and catarrho-scrofulous opthalmia, was attacked with incipient inflammation of the brain, and treated with Calomel, &c., from the 17th to the 26th of June, when all the signs of effusion sat in; he was entirely unconscious; tossed about the right leg in a restless manner, while the left lay paralysed and motionless; occasionally sudden starts of the whole body, and screaming fits; the eyeballs were drawn spasmodically upwards, and only partially covered by the lids; the pupils were entirely immovable and very widely dilated; the conjunctiva was reddened and the cornea and edges of the lids covered with

purulent mucus; the nostrils were dry; face pale and sunken; mouth distorted and partly opened, with frequent sucking motion of the lips; tongue moist; gums touched, and together with the teeth and lips were covered with brown sordes; there was frequent gritting of the teeth; slow and unfrequent pulse; dry skin; great thirst; constipation and almost entire suppression of urine.

Treatment.—Kali-hydriod., half a drachm in three ounces of water, and one ounce of simple syrup, a moderate tablespoonful every two hours. On the next day, with the exception of some congestion of the head, for which seven leeches were applied to the mastoid processes, there was evident improvement, which progressed steadily under a renewal of the prescription on the 28th and 30th of June, and 2d of July. The critical appearances were a profuse secretion of urine, which was at first turbid, but soon became clear; several semi-fluid stools; moderate warm perspiration, some white miliary eruption upon the chest and neck, especially in the outbreak of *boils* upon the forehead, scalp and nape of neck; these were of various sizes, some as large as a hazel-nut; they suppurated and ulcerated, and their irruption was aided by the application of Tartar-emetic ointment for several days. Dryness of the mouth, and a frequent, dry cough, were also noticed as effects of the remedy. The child was entirely restored in eighteen days, under the use of half an ounce of Hydriodate of Potash.—AMELUNG.

CASE 68.—A little boy, aged 2⅓ years, suffering with dropsy of the brain and consumption, was so far restored by the use of six drachms of Kali-hydriod. in four days, that there seemed but little doubt that he would recover from the brain disease. The pupils became regular, consciousness was restored, although the little patient could not speak, he could hold up his head somewhat, and move his emaciated limbs, he passed much urine, had several stools per day, and pimples and boils commenced to break out upon his head, aided by the application of Tartar-emetic ointment. Finally the hydrocephalic symptoms disappeared entirely, but the child ultimately died of consumption.—Dr. ROESER.

CASE 69.—A boy, aged 2½ years, previously quite healthy,

was attacked with decided inflammation of the brain attended with fever, headache, contracted pupils, intolerance of light, vomiting and constipation.

Treatment and Result.—Eight leeches were applied to the temples, and two grains of Calomel given every two hours; the Mercury had not operated upon the bowels at the end of several days, the vomiting had ceased, the headache persisted, also the stupor, from which, however, the little patient occasionally started up with frightful screams. Ice was applied to the head, six more leeches to the temples and a blister to the back of the neck. After the use of several drachms of Calomel, the constipation persisted and the most decided signs of dropsy of the brain sat in. There was constant stupor, squinting, very much dilated and insensible pupils, frequent automatic screaming, dirty and dry tongue and slowness of the pulse.

Treatment.—Kali-hydriod., two drachms in one and a half ounces of water, twenty to thirty drops per dose, every hour; the whole quantity to be used every twenty-four hours. At the end of two days several loose stools had occurred, the pulse was fuller, harder and quicker, the pupils somewhat contracted and sensitive to light, gums touched by Mercury. At the end of nine days consciousness was entirely restored, pupils natural, sopor gone, and there was only a little squinting with one eye.

Violent mercurial gangrene of the mouth was followed by great restlessness and delirium; and the Hydriodate of Potash was stopped, but had to be resumed again in seven days on account of a return of the brain symptoms; two drachms were used per day with rapid improvement for seventeen days, when the patient had perfect possession of his mental faculties, was stout and blooming, but some of his teeth had fallen out, and part of his jaw-bone was loose.—Dr. Roeser.

N. B.—Since Roeser has resorted to such heroic doses of Hydriodate of Potash, sometimes using three ounces and six drachms in one case, he has only met with three fatal cases out of many; in one of these cases a post mortem examination revealed tubercles and ulceration of the lungs; in the two other cases the remedy was given too late and quite irregularly.

CASE 70.—A boy, aged 5 years, was attacked with violent inflammation of the brain, eight days after a fall upon the head.

Symptoms.—Perfect stupefaction and blindness, heat of the head, immoveableness of the pupils, entire suppression of all the secretions, quickened pulse, and violent, finally incessant convulsions, passing over into opisthotonos.

Treatment.—After the fruitless use of leeches, ice to the head, Calomel and Sublimate in unction, Kali-hydriod. was given, one to two drachms in two ounces of water, a teaspoonful per dose. At first the symptoms were rather aggravated, but improvement soon sat in after the occurrence of profuse urination and copious discharge from the nose.—ZIMMERMANN.

CASE 71.—A boy, aged 2 years, previously afflicted with eruptions upon the head and face, was attacked with violent inflammation of the brain, apparently in consequence of repeated falls upon the head. Very active antiphlogistic and counter-irritant treatment had produced no good effect at the end of five days, on the contrary all the signs of effusion had taken place.

Symptoms.—The eyes were fixed and watery; pupils immoveable and widely dilated; absolute blindness; tetanic rigidity of the muscles of the nape; retraction of the head; paralysis of the left side; deep stupor; slow pulse, down to 50; frequent screaming and vomiting.

Treatment.—Kali-hydriod., one drachm in half an oz. of water, forty and finally fifty drops per dose, every two hours; without improvement for the first three days; but on the fourth day of the Potash treatment and ninth of the disease, profuse secretion of urine sat in, with evident improvement in all the alarming symptoms; after the use of two drachms of the Hydriodate he was almost out of danger on the twelfth day of the attack.—Frank's Magazine.—Dr. WOENIGER.

CASE 72.—The head of the patient at birth was unusually large and the fontanelles widely separated, the membranous portions being quite protuberant, with fluctuation; the child had had frequent convulsions and occasional paralysis. When Dr. BARBOUR saw the case, the head was of monstrous size; the fontanelles very large, the anterior being at least three inches in diameter, and occupied by a large fluctuating tumor, elevated about an inch above the level of the skull; the sagittal

suture was widely open, and all the bones of the head quite moveable and compressible; his neck was remarkably emaciated and slender, so much so, that the weighty head could only be sustained by the shoulder on which it constantly leaned. Chronic diarrhœa also existed, attended with general emaciation, tumid abdomen and irritative fever; in fact he presented the most prominent symptoms of marasmus in connection with chronic dropsy of the brain.

Treatment.—In order to improve the secretions and check the diarrhœa Hydrarg.-cicuta and Pulv.-dover, grs. xv., made into twelve powders, one every six hours; this had such decided effect that an occasional laxative had to be given. To promote the absorption of the fluid and improve the general constitution, Hydriod.-potass., half a drachm in 2 ounces water, one teaspoonful three times a day was given. A blister was applied to the head, and frequent effusions of cold water were used. This course was continued for six weeks, and the result was highly gratifying; the irritative fever gradually yielded; the head diminished in size, day by day; the fontanelles became gradually reduced to their natural size; the convulsions did not recur; and the little boy gained flesh, strength and color, and finally appeared perfectly well. Dr. BARBOUR's great reliance, at least theoretically, was upon the Hydriodate of Potash.

CASE 73.—A girl, 12 years of age, was attacked with arthrit. acut. vaga. About midnight on the 16th of January, she became delirious and restless, sometimes sitting up in bed, at others lying down again. The inflammation of the wrists had ceased, and appeared to settle in the meninges; the patient was nearly given up.

Treatment—Iod.-solut., (ten gran. in half ounce of Alcohol,) two drops, p. d., to be taken half-hourly, for one day; on the second day, hourly; on the two following days every two hours. On the 17th the consciousness was already regained, the right hand had re-inflamed, the meninges were free. She then took Ant.-cr. and Bryon., and on the 26th was also recovered from the arthritis.—SCHMID, 130.

NATURAL CURES.

CASE 74.—A boy, aged 2½ years, robust, with a large head, and prominent forehead, was taken sick on the eighth of December. Six days afterwards acute hydrocephalus, was fully developed; the fontanelles were still widely open; leeches, Calomel, &c. were given without benefit, and on the eighteenth day the boy lay helpless and stupefied; his head and face were alternately hot and red; he gritted his teeth; the pupils were dilated and insensible to light; he swallowed fluids hastily: this state lasted two days more, when a larger quantity of clear watery fluid flowed from the ear, and the patient improved on the same evening; profuse flow of urine also sat in and lasted for several days; in a few days more the little patient was decidedly convalescent, and recovered perfectly in six weeks. Two profusely suppurating spots also formed on the back of the head. The author had previously witnessed a similar case.—RIECKE.

CASE 75.—A little girl, aged 4 years, had been sick for five days with inflammation of the brain, for which she had received no medical treatment, and now seemed at the point of death. Her face was red; eyes rigid and immoveable; breathing frequent and irregular; pulse hard and intermitting; for two days everything that she had swallowed had been ejected again through the nostrils. Ice to the head, leeches and injections were used without benefit; at the end of eight days more, her face was pale and sunken; nose and ears cold; pupils dilated; eyes turned up; mouth open; breathing scarcely perceptible; pulse small, frequent and intermitting; constipation for eight days, and no urine had been passed for three days; the right arm and leg were moved automatically; the whole left side seemed paralyzed. On the next day the whole scalp was slightly reddened and covered with an immense number of small miliary vesicles, which increased in size for two days more, then ran together, burst and discharged a large quantity of yellowish watery fluid, followed by improvement of the brain symptoms. At the end of a few days more the whole head and face were covered with a thick scab, through the fissures of which a bloody

serous fluid exuded; evacuations from the bowels and bladder had commenced. In eight days more the little patient was out of danger; but she did not recover her speech or the use of the left side until after the lapse of many weeks.—MALIN.

CASE 76.—A little boy, aged 1½ years, became sick two weeks after an attack of scarlet fever; gradually all the signs of dropsy of the brain developed themselves; his face became pale; pupils dilated and fixed; the conjunctiva reddened; cornea dull and coated with mucus; entire stupor for three days; convulsions of the right side; boring of the head into the pillow; vomiting and constipation had been followed by involuntary diarrhœa; pulse was small and frequent, with occasional intermissions. Elder tea caused such a profuse perspiration that a large bed was saturated both above and below, and the child speedily recovered.—RITSCHER.

CASE 77.—A boy, aged 1½ years, had so large and heavy a hydrocephalic head that he could not hold it up without support; the head was soft and doughy to the feel; the fontanelles were wide open; the rest of the body delicate and relaxed. At the end of five years the reporter was surprised to find him alive and well; the head was only a little larger than natural; the bones were firm and closed; the body well nourished; the mental faculties moderately developed; the parents assured him that no medicine had been given and that everything had been left to nature.—Frank's Magazine.—DORFMÜLLER.

CASE 78.—An infant, aged 6 months, had suffered severely during the month from cold, which resulted in an enlargement of the head, which was one-third larger than natural; the sutures were all widely open, the fissure commencing at the root of the nose and extending up the forehead, being one inch across; the anterior fontanelle was capacious enough to admit three fingers; the coronal and sagittal sutures were also widely extended; the scalp covering these broad fissures was puffed and elastic to the touch, indicating the presence of fluid beneath. Dilatation of the pupils, squinting, jerking of the limbs, screaming, tossing of the arms upwards, plainly denoted the dropsical nature of the little patient's brain affection; the bowels were also costive, and vomiting frequently occurred.

Treatment.—Kali-hydriod., twenty-five grains, gradually increased to forty grains to the ounce of lard, to be rubbed over the whole head, twice in twenty-four hours; also a solution of 20 grains to the ounce of water, ten drops to be given morning and evening. This treatment was continued for nearly one month without benefit; then blisters were ordered to the head, first on one entire half, and then on the other, so that one side was always under the influence of the irritant; two grains of blue pill were given twice daily; but in spite of this, general anasarca sat in, and Hydriodate of Potash ointment was applied over the whole chest and abdomen. And now appeared the crisis of the case, for a vesicular eruption broke out over the whole body, the vesicles bursting and discharging pure lymph. From this critical discharge, the convalescence of the patient commenced, but the remedies were still continued for four months, when the child was perfectly healthy and sprightly, although there was still some obliquity of vision.

Dr. KENNEDY asks: Is the treatment of the more ordinary or sub-acute form of hydrocephalus too heroic? He believes it to be so, in the allopathic school, and that a better prospect of cure will be held out by a treatment a good deal modified from that in common use. Of *bleeding* he is fully satisfied that very little of it will answer every purpose; he has even noticed that cases left to themselves, without treatment for days, did not appear to run a more rapid course than those where active measures had been adopted from the outset. To *Mercury* similar remarks, Dr. KENNEDY thinks, apply. It would seem, as far as he has seen, to be used as a sine qua non: and yet the results do not appear to justify such faith in it; he has notes of more than twenty cases of hydrocephalus, in which the specific effects of Mercury were produced, and yet in not one of these cases was the result favorable, to say nothing of others, where salivation could not be induced. Is it right to give Mercury to weak and strumous children, he would ask, and do our utmost to induce its specific effects? The answer to this must be in the negative. KENNEDY gives four cases, which include all those of recovery which he has seen in a period of several years, after the disease had passed into the second stage, that is when the pulse had fallen. Now it is specially

worthy of notice that three out of four had never been salivated, and in the fourth salivation was produced more by accident than design.

Treatment.—All four cases were leeched; the grey powder in very minute doses, as an alterative was administered in antimonial powder; blistering was very freely used, at first in the ordinary mode, and subsequently in two cases, under the form of the Tartar-emetic plaster applied to the head; and in this way a constant discharge was kept up. But, in addition to these measures, particular attention was paid to keep up the strength; some got beef-tea and others wine, and this while the disease was still present. A child of six years of age, got two ounces of wine, which was increased to three in the day, and this while the pupils were still dilated, while the screaming was constant and the convulsions persisted; and it was apparently under its use that this child rallied.

Several of the natural cures took place after the outbreak of pustules upon the head, or eruptions over the body. Dr. HAHN has saved fourteen cases by means of frictions of the scalp with Tartar-emetic ointment, repeated every two hours, until pustulation is established; he claims to have saved fourteen cases in apparently a hopeless state of coma.

CASE 79.—A fine boy, aged 9 months, was suddenly attacked with convulsions; he recovered from these and cut his first teeth shortly afterwards; but soon began to fall away, to become listless and lose his appetite; his bowels became constipated; pulse irregular; he also began to vomit and to become torpid; fever was soon added to his symptoms, and it was evident that he was the subject of meningitis.

Treatment.—Leeches were applied, and Calomel given, but in spite of this treatment he lapsed into complete coma. As soon as the coma became distinct, Tartar-emetic ointment was rubbed into the scalp every four hours, over a space the size of a crown piece; free suppuration ensued and signs of improvement were speedily witnessed; the child gradually became more conscious, his appetite returned, and in two weeks all traces of his disease had vanished.

OPIUM.

General Remarks.—According to Waring Opium is generally contra-indicated in acute inflammation of the brain, which tends to produce death by coma; there are, however, occasional exceptions to this rule; as, for instance, in inflammation of the brain, in which Dr. Griffin states that Opium, given in combination with Tartar-emetic, exerts an extraordinary power in allaying nervous irritation, quieting increased action in the capillaries, and inducing sound and refreshing sleep. It should, however, be employed with extreme caution, and only by one whose experience in this class of diseases gives him a title to depart from what is generally regarded as safe practice.

In delirium occasioned by inflammatory action of the brain, or its membranes, particularly when it assumes a maniacal or violent character, and after depletions have been carried as far as may be thought prudent, and the bowels have been freely evacuated, Dr. Copeland states that he has frequently seen a full dose of Opium or Hyosciamus, given either alone, or with Antimony and Camphor, produce the happiest effect. Any unpleasant symptoms which may result, either from too large doses of these narcotics, or from their inappropriate use, will readily be removed by the cold or tepid affusion upon the head. —Waring.

In hydrocephalus, Opium has sometimes been employed in the second and third stages, to lessen the acute pain in the head, convulsions and irritability of the stomach and bowels; and may be given with this view, at an early period when dropsy of the brain depends upon exhaustion and debility uncomplicated with inflammation. It has often succeeded, observes Dr. Bennett, in effecting this without in any way interfering with the action of other remedies, or inducing constipation when moderately employed. At the early period of the second stage, it may be given with Calomel, James' powder, or Tartar-emetic, in doses varying from gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$, every four hours. According to Crampton and Cheyne, contraction of the pupils following the exhibition of this remedy indicates that it has been pushed sufficiently far. Dr. Risdon Bennett has since stated, that, avoiding its use when the pupil is contracted, he has em-

ployed Opium with the best effect, and has sometimes saved an apparently hopeless case. Drop doses may be repeated every four hours, if no unpleasant symptoms present themselves.—WARING.

WEST says: In the treatment of many diseases you see physicians destroy pain by narcotics, and the question naturally suggests itself to you whether you may not sometimes venture in the management of hydrocephalus to mitigate by their means your patients sufferings? The inquiry is one not very easy to reply to satisfactorily. I think, however, that there are two conditions under which you will be justified in trying the experiment of giving them. Sometimes the disease sets in with great excitement, and a condition closely resembling mania in the adult, symptoms which may have been ushered in by convulsions. In such a case although the heat of the head and flush of the face may have disappeared after free depletion and purgation, and though the pulse is feeble as well as frequent, yet the excitement may be scarcely if at all diminished. Here an opiate will sometimes give relief which nothing else would procure; your patient will fall asleep and wake tranquilized in the course of two or three hours. In other cases which do not set in thus violently, restlessness, talkativeness, or a kind of half-delirious consciousness of pain in the head, become very distressing as the disease advances, being always aggravated at night, so that your patient's condition seems one of constant suffering. Under these circumstances, I [WEST] have sometimes given a full dose of Morphia, and have continued it every night for several nights together with manifest relief.—PETERS.

CASE 80.—GROSS observed during the winter months in a number of children, under 7 years of age, a rheumatic-inflammatory affection of the meninges, which he treated according to circumstances with Bellad., &c. In some, the following condition prevailed: They were continually in slumber, with snoring and half-opened eyes, were awakened with difficulty, on awaking, insensible, complaining of nothing, wanted nothing, but vomited frequently.

Treatment.—Opium 6., cured generally within a few hours. —Arch. 9, 2, 140.

CASE 81.—A boy, aged 4 years, after a fall upon the head, got an attack of hydroceph. ac.—Acon. was taken first, then Bell. 30., and after fourteen hours he appeared to be out of danger. The recovery progressed until the fifth day of the disease; but there still existed a state of apathy, accompanied by a short, dry cough, constipation, all of which were relieved after Bryon 30. had been taken. On the seventh day of the malady he had the following:

Symptoms.—An increased condition of stupefaction, the Iris more insensible than in the last few days, the eyes not quite closed in sleeping. Three large worms passed without excrement through the fundament.

Treatment.—Opium 6. followed by sixteen hours sleep and after awaking by a profuse sweat, when the brain was entirely relieved.—BETHMANN.

CASE 82.—A girl, aged 17 years, of delicate phlegmatic constitution, whose sister had died with hydroceph. acut., complained of dizziness, headache, and vomiting, which increased daily; for four weeks she had been surly, and had lost her good looks; her cheeks were hollow, face pale yellow; eyes weak and without expression; the brain appeared as if oppressed by a heavy burden.

Treatment.—Bell. 18. in solution; she soon became unable to speak; was continually drowsy; she stared vaguely when spoken to, without giving any answer; all the former symptoms remained. Opium 4. in solution, two spoonsful morning and evening, was followed by a tolerable state of quietness, and the excessive desire for sleep disappeared; the patient improved rapidly.—MOOR.

REVIEW.—In the foregoing cases we find an amazed and stupid state, continual slumbering with half-opened eyes, snoring, and insensibility of the iris. GROSS observed principally a rheumatic-inflammatory irritation of the meninges; in one case a fall upon the head preceded the attack, and Acon., Bell. and Bryon. were given, with little effect; in another Bell. was prescribed without benefit. The *doses*, Opium 6. in two cases; the 4th dilution, in solution, in one case. This remedy is so decidedly homœopathic to congestions of the brain, that it deserves more frequent trials.

RHUS-TOXICODENDRON.

General Remarks.—Rhus is peculiarly homœopathic to inflammatory œdema, and to all inflammations attended with a copious effusion of serum; hence to all inflammatory dropsies, and to dropsy and œdema of the brain. In this respect it is the analogue of Arsenicum and Cantharides. If it were possible to obtain and retain the recent juice in all its original activity, it would probably form a more efficient external application than Cantharides, Croton-oil or Tartar-emetic.

It will perhaps prove most useful in the paralytic stage of hydrocephalus, and in those cases which arise from the suppression or retention of eruptive diseases. At least Dufresnoy, army physician and professor of botany in Valenciennes, employed it with success against *tetters* and *paralysis*. Of the twelve cases he published in 1788, seven refer to cutaneous affections, and five to paralysis consequent upon convulsions. Pontagnon of Montpelier cured a paralytic patient in a fortnight; and Gonan cured a young lady in a few weeks of hemiphlegia. Verdegen, Kok and Van Baerlem obtained similar results. Finally Alderson of England has published seventeen cases which go to prove the efficacy of Rhus against paralysis, and in general against all affections characterized by debility of the muscles. Hull and Duncan also advise it. It proved successful in four cases in which it was employed by Duncan; in each, a peculiar feeling of pricking or twitching, preceded permanent benefit. This sensation was so unpleasant that Dr. Duncan was obliged to discontinue it in one case. In general it operated as a gentle aperient, notwithstanding the torpid state of the bowels of such patients. In bad cases it may be commenced in doses of gr. j. of the dried leaves, and continued until grs. iv. or v. are taken daily, or until a pricking sensation is experienced in the affected part. Frictions with oil in which the fresh leaves have been digested may be employed at the same time.—Peters.

In the inflammatory dropsy of the brain, Rhus is, particularly in the second stage, or that of the effusion, one of the most important remedies. It is indicated when there is a soporific

condition, inclination to paralysis, with a continuance of the sensorial activity; when there is a sense of fluctuating of the head, turning dizziness, and a painful, anxious disturbance, principally on the hind-head, where the patient feels the fluctuating; when there are convulsive motions of the limbs, with great complaint of severe headache; when the patient lies for a time in a state of dizziness, until the more severe attacks are renewed in shorter intervals; this hopeless state may often be cured within a few hours with this remedy.—HARTMANN.

CASE 83.—A little girl, 8 years of age, suffering for ten days with inflammation of the brain, showed the following:

Symptoms.—Loss of consciousness for two days; the right upper and lower limbs paralyzed; pulse quick, trembling, scarcely perceptible; urine passed involuntarily; slow breathing with frequent sighing; general appearance cadaverous; eyelids œdematous and swollen; body cold.

Treatment.—Arsen., Digit. and Merc.-s. produced but transient improvement.—Rhus. 6. one drop in one ounce of water, every four hours a teaspoonful, led within twelve days to a complete recovery. The second day after commencing the Rhus., a moist cough appeared, which is to be considered as a favorable sign.—STURM.

STURM remarks, that in eight cases of Hydroceph. ac. which he had treated, (the above one is the third,) were under the unfavorable circumstances of the already existing second stage, a recovery was obtained. In the first case Digit. and Hyosc.—in the second Merc., Arnica and Sulph. were the efficient remedies; the other five cases came under treatment at the beginning of the disease.

REVIEW.—But little, yet enough is to be remarked, in regard to the use of Rhus., in the second stage of inflammation of the brain. HARTMANN says it removes an inclination to paralysis, and STURM that it cured paralysis of the upper and lower limbs. The cadaverous appearance, œdematous and swollen eyelids, are symptoms we often meet with in cases cured with Rhus.

STRAMONIUM.

General Remarks.—The action of this remedy is very similar to that of Belladonna, (see page 88); it seems to act principally upon the blood and many of the ramifications of the great sympathetic nerve, especially in the brain, eyes, throat and genital organs. Its action upon the throat and skin is similar to that produced by the poison of scarlet fever; it is apt, like Belladonna, to produce paralysis of all the involuntary muscles, or those supplied by the sympathetic nerve, while its action upon the motor or spinal system of nerves, is nearly the opposite of this, or that of an irritant: thus it produces dilatation of the pupils, spasmodic contraction of the muscles of the face, relaxation of the cardiac and pyloric orifices of the stomach and of the muscular coat of the stomach and bowels, while it causes violent spasmodic contraction of the muscles of the throat; it will allay spasms of the bronchi, and excite cramps of the muscles of the limbs, &c., &c. It does not act upon the glands like Belladonna.

A tablespoonful of the seeds produced in a man aged 60, and his wife: vertigo, stupefaction, coma and spasms; their respiration was stertorous, they were completely unconscious, with hanging down of the lower jaw; they had cramps in the hands and feet, and rolling of the eyes with dilated pupils and intolerance of light; they made automatic motions and graspings with the hands, sometimes towards the nose, ears or head; the skin was cool, pulse somewhat quickened, with occasional intermissions; the swallowing of fluids was very difficult. After vomiting and purging there was some return of consciousness, with abatement of the cramps, but the face and hands remained cold; they had some burning pain in the distended abdomen, and their voices were hoarse and lisping; swallowing was painful and difficult.—Frank.

A girl, aged 4, ate of the seeds; she complained of pain in the ears and was put to bed; but instead of sleeping she became more and more excited and began to sing and speak confused stuff; her eyes were bright, pupils dilated and almost entirely insensible to light; pulse tranquil and skin cool; she

began to talk almost incessantly in a most confused and incomprehensible manner, and often wept; she grasped frequently with her hands into the empty air, as if she would seize something, and occasionally seemed to be seeking something in the bed with her fingers; she could not stand for her knees bent under her immediately when she attempted it, and when she tried to rise she fell staggering about as if intoxicated; the abdomen was soft and painless and she was not thirsty. She recovered after free vomiting.—FRANK.

A boy, aged 4 years, from eating the seeds, was found sitting up in bed, entirely unconscious, with flushed face, restless and brilliant eyes, widely dilated and rigid pupils, a peculiar and drunken look; he chattered incessantly without rhyme or reason and entirely without connection; he frequently sprang upwards hastily and anxiously, grasped about with his hands, and snatched at the air; he had no fever and his pulse was sluggish and slow; still he had a hot perspiration and drank eagerly, but these arose from his violent muscular exertions and from dryness of his throat. He recovered after free vomiting and purging.—FRANK.

A robust boy, aged 3 years, ate of the seeds; soon after he complained of scratching in his throat and wished to be put to bed; he laid down upon his stomach, bored with his head into the pillow, and his hands and feet commenced to tremble; in half an hour afterwards he became unconscious and fell into the most violent spasms; his head was very hot, face dark red, his limbs redder than natural, his pupils greatly dilated, and he had profuse salivation; gritting of the teeth, violent trembling, convulsive attacks and paroxysms of great anxiety sat in, during which the child constantly exposed his genitals; the abdomen was distended, but not painful. Free vomiting and purging, with cold applications to the head, produced much relief; the intense redness of the face and the convulsions abated first, but the other symptoms persisted, especially the excitement, for the child continued to sing, scream and moved its eyes and hands for several hours, until it finally fell into a refreshing sleep, but the singing and screaming were still present on the next day, after which he slept for eight hours, and awoke quite restored. —FRANK.

The leaves produced in four persons: sudden mental derangement, they made laughable movements, had vertigo, dilated pupils and distended abdomens.—FRANK.

Three cupsful of an infusion of the plant and seeds produced: nausea and great anxiety; the patient a robust and plethoric woman was found lying unconscious with closed eyes and mouth, violent throbbing of the pulse and spasms of the limbs; she was bled two pounds, when she opened her eyes, and stared wildly about her; her pupils were widely dilated and insensible to light and touch; the mouth could be opened, but the tongue was immoveable and she could utter no sound; the upper part of the body was drawn backwards spasmodically. Injections and counter irritation were followed by sleep and perspiration, with relief from the spasms.—FRANK.

A child, aged 1½ years, ate of the seeds, and was attacked with spasms and distension of the abdomen, followed by unconsciousness. It was restored by vomiting and purging.—FRANK.

A girl, aged 3 years, ate a considerable number of the seeds: she was attacked with violent convulsions of the arms, paralysis of the legs, the tongue hung out of her mouth, her eyes were quite fixed, pupils widely dilated, with muttering and loss of consciousness. Vomiting and purging were followed by relief; but on the next day the child complained that it was very dark and wished candles to be lighted; the pupils still remained much dilated; she had several bloody stools and finally recovered on the third day.—FRANK.

A man, suffering with rheumatism of the head, took six drops of the Tincture every two hours, and was apparently cured in a few days; but he increased the doses three or four-fold, and was suddenly attacked with heaviness of the head, stupefaction, inclination to vomit, great debility and dejection, staggering walk and inability to walk even a few steps, dilatation of the pupils, dryness of the lips and tongue, violent delirium, hard and full pulse, and discharge of thin almost spring-water-like urine. He recovered in a few days and his head-rheumatism never returned.—FRANK.

From their tendency to produce eruptions upon the skin, the internal use of Belladonna and Stramonium may prove as useful as Croton oil or Tartar-emetic ointment applied externally. Thus, in one case in which the patient was quite stupid, with quick pulse, hot skin, constant motion of the head, and of the hands to the head, intolerance of light, &c., and all these symptoms became gradually aggravated for nine days when a well-marked eruption of measles appeared with improvement in all the head symptoms; the child appeared less stupid, somewhat conscious and could more readily distinguish those about her. In another case of strongly marked cerebral symptoms, simulating meningitis in a child five years old, where they appeared to depend upon a slight erythematous affection of the face imperfectly developing itself; there was great restlessness, high fever, extreme dilatation of the pupils, unconsciousness, insensibility to light, and incessant rolling of the head from one side to the other; these symptoms lasted five or six days and subsided on the appearance of a full eruption from Croton oil on the back of the neck.

Belladonna and Stramonium may have a homœopathic relation to a peculiar diagnostic sign in tubercular meningitis, first announced by Trousseau, and which consists in the appearance of a remarkable *red line* remaining upon the skin of the forehead, or of the abdomen, after drawing the finger across it. A female patient of Dr. Parkman's who had scrofulous disease of the clavicle, was, when about to undergo an operation seized with a fatal illness, which Dr. P. diagnosed as tuberculous meningitis, from the peculiar red line spoken of above.

The above remedies are also homœopathic to great dryness of the mouth and nose, and Dr. Romberg states that the condition of the nasal mucous membrane constitutes a good diagnostic sign in head-affections; if the secretion be arrested and the nose be dry, then meningitis is impending. Other signs of meningitis in infants, are: the continual attempt to bury the occiput in the pillow, and a frequent change of color in the cheeks, and especially in one cheek only. Vomiting is often observed, but with these peculiarities, that it occurred when the stomach was empty, without nausea, without straining, and was brought on by moving or shaking the head. The expression of

the eyes is noticeable; children usually follow with their eyes the eyes of their attendants; in meningitis they cease to do this. —ROMBERG.

CASE 84.—A girl, suffering with small-pox and meningitis, was attacked with convulsive and paralytic symptoms.

Treatment.—Tinct.-stram., five drops, in spir.-vini. half an ounce, removed the dangerous condition instantly.—Arch. 20, 2, 145, GOULLON.

In cases, where during and after an attack of small-pox, the most violent and most dangerous affections of the brain set in, accompanied by delirium, STAPF found Stram. in the 12th potency a quick and lasting remedy.—Ibid.

CASE 85.—GROSS observed during the winter season, among children under seven years, a rheumatic-inflammatory affection of the meninges, with the following:

Symptoms.—Sleep was not very heavy and soporose, but frequent convulsions of the limbs sat in, attended with groaning; disturbance of the mind; on awaking there was a peculiar kind of fatuity; the look was staring, and the child had a desperate air, gazing fixedly at one point, this state sometimes disappeared slowly, sometimes it passed off with a severe fit of crying, during which the child clung to near objects; the whole attended with high fever, redness of the face and perspiration. Stramonium 9. removed this state quickly and completely.—Other persons between fifteen and twenty-five years suffered with extreme absence of mind, they slept little, were taciturn, did not feel inclined to answer questions, were almost insensible and immovable, without being unconscious. Spirit.-nitr.-æther. was more useful than Stramon.—Arch. 9, 2, 140.

REVIEW.—Both experience and the remarks of STAPF, tend to prove that Stram. in suitable cases, is peculiarly adapted to inflammation of the meninges. STAPF says Stram. is particularly useful when spasms of the bladder are present.

SULPHUR.

General Remarks.—*a.* In the period, says Wahle, where the signs of exudation, under the well-known phenomena have appeared, if Hell.-nig. does not remove the danger in the course of six or eight hours, we have still a good remedy in Sulph. 30. and 60. It ought not to be given internally, but a few globules only should be smelled at. (Bah!)—Arch. 15, 2, 23.

b. Rummel says, that a physician is frequently not sent for in diseases of children until convulsions have set in, and these then mask the real malady which existed previously. The principal remedy is, according to his experience, Sulph. 30. He has used it with good effects even when inflammatory and exudative affections of the brain were present. If this remedy produces no good effect, the patient is generally in a hopeless state; but occasionally he found the previous and alternate use of Acon. and Bell. somewhat useful. He did not use Sulphur in any other potency than the 30th, and found it more useful in the erethistic than in the torpid stage.—Allg. Hom. Ztg., 32, 345.

CASE 86.—Résumé of the symptoms of inflammation of the brain in thirteen children, from four to ten years of age, boys and girls, of whom only one died, on account of too late assistance.

Premonitory Symptoms.—A short time before the beginning of the attack there was observed an insignificant scurf upon the face, or a little roughness of the chin, ears or face, or scurfy pustules on the lips. The scurf fell off suddenly, the pustules dried up quickly and healed. One or two days before the beginning of the malady the patient had no appetite, with heaviness of the head, chilliness and debility.

Symptoms of the Attack.—Soporific sleep disturbed every ten to twenty minutes by a sudden awaking, with a heavy, audible crying, ah! ah! or: oh! dear me! or restlessness for several minutes, followed again by sopor; gnashing of the teeth, vomiting of the food, intolerance of light, constipation, weak and frequent pulse, thirst, dry and white coated tongue, sour smell of the mouth, redness of the cheeks, or one cheek red, the other

pale, perspiration of the head, with a dry, more or less cool skin of the body; the perspiration of the head emitted a musk-like smell.

Treatment.—Acon. and Bell. without effect. Sulphur $\frac{3}{1500}$, every six to twelve hours, effected the cure; to one child, Phosphor. $\frac{3}{10}$ was given with the best effect.

Course of the Disease.—After giving Acon. and Bellad.; crying out in the sleep rarely took place, sleep became more natural, still the child complained about pain of the fore- and hind-head, as well as about the vertex. From the use of Sulphur and Phosphor., the vomiting ceased, constipation abated, the symptoms of fever ceased, as well as the heavy sweating of the head, the skin got moist and a cure followed. Some children were cured after sixteen, others after twelve, and still others after eight doses.—Arch. 16, 1, 61, WEBER.

CASE 87.—A boy, $2\frac{1}{2}$ years of age, was taken sick with the following:

Symptoms.—Head so heavy that it could scarcely be kept straight and fell to the side; holding it erect produced vomiting of liquids, or of slime; the child slept most of the time; was frightened, as if from anxiety; the cheeks changed frequently from pale to red, or if one was red, the other was pale. The limbs were cold; there was perspiration only on the head, which was very hot; thirst; pulse 100.

Treatment.—Acon. $\frac{}{30}$, ten drops, every two hours, followed by Bell. 30. after eight hours, without effect. Afterwards Sulphur $\frac{}{1500}$, every twelve hours. After four doses the child was perfectly cured, with the exception of great debility. Bell. $\frac{}{30}$, removed the weakness within four days.—Arch. 16, 2, 3, WEBER.

CASE 88.—Three cases of inflammation of the brain, in the persons of a boy, aged three years, and two girls of five years.

Symptoms.—Could only lay the head in certain situations; it had to be kept low, otherwise the child would cry and vomit; deep sleep, interrupted by raving; awaking with a heavy start, although ordinary calling and speaking would not awaken the patient; penetrating sour smell of the mouth.

Treatment.—Acon. and Bellad. were of no use, but after several doses of Sulph. 1500. a cure began instantly.—Arch. 16, 2, 5–10, WEBER.

REVIEW.—Of no remedy have we so many observations as of Sulph.; it proved useful even when the disease was approaching to the second stage, and when Acon., Bell. and Hellebore had been given without effect. It was given in high potencies, the 30th, 60th or 1500th. Among the characteristic symptoms we do not find the boring with the head, but rather a sinking down from heaviness; sweat on the head with a musk-like smell; changing of the color of the face; sour smell of the mouth.

The cure was in all cases rapid and progressive.

The doses as above mentioned were all high potencies.

VERATRUM.

CASE 89.—A child, 11 months of age, had on the fifth day of illness the following:

Symptoms.—It lies slumbering upon its back; eyes half closed; face pale and thin; it rolled its head violently from side to side, with sharp screams; or bored into the pillow; transient redness of the cheeks; throwing off the bed-clothes; the head when raised fell down backwards, with convulsive motions of the limbs; the eyes were languid and lifeless, with greatly contracted pupils; the child noticed nothing; its eyes resembled a dull, gliding glass, covered with a thin transparent mucus, which dried into hard masses in the corners; it remained in a torpid state even when spoken to loudly; when it was raised up it had several convulsive shocks and inclination to vomit. At the beginning of the attack there were frequent paroxysms of vomiting and diarrhœa; the head was hot, the body almost cool; pulse without strength and of diminished frequency; it refused to nurse.

Treatment and Result.—Verat.-alb. 2., twenty drops in two ounces aq. d., a teaspoonful every three hours. At the end of twenty-four hours after the patient had received three doses, there seemed little chance of life; but on the fourth day of the treatment, the patient having taken the Veratrum regularly, the following state of things was present: when called, the child cast its eyes to the place where the call came from; the pupils were of natural size, eyes bright and expressive; the child was

awake almost every hour; has taken the mother's breast; tried to hold its head up; there were thin discharges from the bowels. The recovery was soon perfected.—Allg. Hom. Ztg. 19, 38, KNORRE.

ZINCUM.

GENERAL REMARKS.—In the irritative stage, says HARTMANN, if Bell. is without effect, Zinc. is incomparable in the second to third triturations; it should be given every two hours. He has never given this medicine in vain, and generally after the lapse of twelve to twenty-four hours, the crisis was perfectly formed.—Dess. Therap. 1, 540.

GENERAL REVIEW,

BY RUECKERT.

The principal remedy was Bell. thirty-seven times. Sulph. sixteen times. Aconite fifteen times. Bryon. and Opium three times. Arn., Hell., Hyosc. and Stram. twice. Cupr., Digit., Iod., Rhus. and Verat. once. Zinc. is recommended. Opium, Stram. and Spir.-nitr.-dulc. were frequently used in some epidemics.

Form of inflammation:

1. In encephalitis: Bell., Bry., Hyosc.
2. In inflammation of the meninges: Bell., Bry., Iod., Op., Spir.-nitr.-dulc., Stram.
3. In hydrocephalus-acut.
   - *a.* In the first stage: Acon.
   - *b.* " second stage: Arn., Bell., Digit., Hell., Rhus., Sulph., Verat.
   - *c.* In the third stage: Helleb.

In order to secure a quick survey of the principal indications, we append the annexed synopsis.

During and after acute exanthems, such as scarlet fever or measles, when inflammation of the brain appeared, Arn., Bell., Cupr.—From dentition, Acon., Cupr.—During febrile catarrh, Cupr.—After sun-stroke, Bell.—During and after small pox,

Stram. Reports of cases have been contributed by thirty-eight physicians.

Doses.—The strong tincture was only used in a few cases; from the first to the third potencies 35 times, viz.: 5 times in drop doses, 14 times in single doses, and 15 times in solution and repeated doses. From the fourth to the high potencies were used in 58 cases. 24 times but one remedy was given, 10 times single doses, 7 times in solution, 17 times in high potency in repeated doses. Of the cases in which one remedy alone proved successful: Acon. was given in 3 cases.

Bell. " " "21 "

Bryon. " " " 1 case.—25 cases. To these we may add the 16 cases treated with Sulph., in which Acon. and Bell. were given without effect; 16, without regarding many other cases in which other remedies were given without effect, thus we have in whole 41 cases cured by one remedy.

These cases deserve sufficient attention to encourage us to attempt to cure without a sudden change of remedies. In general we may say that 12 children were cured by taking Sulph. Some required 16, others 12, others eight doses to effect a cure.

Among 18 cases:

In 10 the cure was effected in from 4 to 12 hours.
" 6 " " " 15 to 24 "
" 2 " " " 3 to 5 days.

A complete cure was effected in 30 cases;
23 times in from 1 to 5 days.
6 " " 6 to 12 "
once in 4 weeks.

Most of the cases, after the dangerous signs had ceased, were cured gradually without particular crisis. In 7 cases there was a quiet, many hours' lasting sleep; in 5 cases sweat; in 2 cases diarrhœa; in 2 cases boils; in 2 cases discharge from the ears; in one case a loose cough.

SPECIAL INDICATIONS.

	Aconite.	*Arnica.*	*Bellad.*	*Bryon.*	*Cuprum.*	*Digital.*	*Helleb or.*	*Hyose.*	*Iodine.*	*Opium.*	*Rhus.*	*Stram.*	*Sulph.*	*Verat.*
Headache, violent and piercing,	..	..	..	Bry.	..	..	..	..	..	..	..	..	..	..
In the head, like swinging,	..	..	Bell	Bry.	..	..	..	..	..	..	Rhus.	..	..	..
Head warm and body cold,	..	..	..	..	..	..	..	..	..	..	..	..	..	Vera.
Heat of the head,	Ac.	..	Bell.	Bry.	..	Dig.	..	..	..	..	..	..	..	..
Sweat of the head, smelling like musk,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Boring with the back of the head,	..	..	..	..	..	..	..	..	..	..	..	..	Sulp.	..
Fluctuating, falling back of the head,	Ac.	..	Bell.	..	..	..	..	..	..	..	..	Str.	..	Vera.
Head, violent turning in,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Face, red,	..	..	Bell	Bry.	Cup	Dig.	Hell.	..	..	..	Rhus.	..	..	Vera.
" bright, nearly brown,	..	..	..	..	..	..	..	..	..	..	..	..	..	Vera.
" slightly red,	..	..	..	Bry.	..	..	..	Hyos.	..	..	..	Str	..	..
Cheeks red,	..	..	..	Bry.	..	..	..	..	..	..	..	Str.	..	..
Face hot,	..	..	Bell	..	..	..	..	..	..	..	..	..	..	..
" pale,	..	..	Bell.	..	..	..	Hell.	..	..	..	..	..	..	..
" changing color,	Ac.	..	..	..	..	..	..	..	..	..	..	..	Sulp.	..
Eyes rolling, turning,	Ac	.	Bell	..	..	Dig.	Hell.	..	..	..	..	..	..	..
" squinting,	..	Arn.	Bell	..	..	Dig.	Hell	..	..	..	..	..	..	..
" staring,	..	..	Bell	.	..	Dig.	..	..	..	..	..	Str	..	..
" half open,	..	..	Bell	Bry.	..	Dig.	Hell.	Hyos.	..	..	..	..	..	Vera.
" sparkling,	..	..	Bell	..	..	..	..	..	..	..	..	..	..	..
" dim, weak,	..	..	Bell	..	..	..	Hell.	Hyos.	..	..	..	..	..	Vera.
Eyelids, œdematous,	..	..	..	..	..	..	..	..	..	..	Rhus.	..	..	..
Pupils enlarged,	..	Arn	Bell	..	..	Dig.	Hell	Hyos.	..	..	..	..	..	..
" contracted,	Ac.	..	Bell.	..	..	..	..	..	..	Op.	..	..	Sulp.	Vera.
Tongue, dry,	Ac.	..	Bell	Bry	..	..	..	..	..	..	..	..	Sulp.	..
" white coated,	..	..	Bell	..	..	..	..	..	..	..	..	..	Sulp.	..
Sour smell of the mouth,	..	..	..	..	..	..	..	..	..	..	..	..	Sulp.	..
Great thirst,	Ac.	..	Bell	Bry.	..	Dig.	..	..	..	..	..	..	Sulp.	..
Gnashing of the teeth,	..	..	Bell	..	..	..	..	..	..	..	..	..	Sulp.	..
Vomiting,	Ac.	..	Bell	..	Cup	..	..	Hyos.	..	Op.	..	..	Sulp.	..
" on rising up,	Ac.	..	Bell	..	..	..	..	..	..	..	..	..	..	..
Abdomen, painful and swollen,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stool, hard, wanting,	..	..	Bell	Bry.	..	..	..	Hyos	..	..	..	..	..	..
" involuntary,	..	..	Bell.	Bry.	..	Dig.	..	..	..	..	..	..	Sulp.	..
Urination involuntary,	..	..	Bell.	..	..	..	Hell.	..	..	..	..	..	..	..
Breathing, anxious, groaning,	..	..	Bell.	..	..	..	Hell.	..	..	..	..	..	..	..
Breathing quickened,	..	Arn	Bell	Bry.	..	..	..	Hyos	..	..	..	..	..	..
Pulse, quick, weak,	..	.	Bell	.	..	..	..	Hyos.	..	..	..	..	..	..
" full, hard,	..	Arn.	Bell	..	..	..	Hell.	..	..	..	..	..	Sulp.	..
" trembling, intermitting,	Ac.	..	Bell.	..	..	..	..	..	..	..	..	..	..	..
" scarcely perceptible,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Beating of the carotids,	..	..	..	..	..	..	Hell.	..	..	..	Rhus.	..	..	..
Convulsive fits,	..	..	..	..	..	..	..	..	..	..	Rhus.	..	..	..
Trembling of the limbs,	..	..	Bell	..	..	..	..	..	..	..	..	..	..	..
Grasping with the hands at the head,	..	Arn	Bell	..	..	Dig.	Hell.	..	..	..	..	..	..	..
Cramps,	..	..	Bell	..	..	..	Hell.	..	..	..	..	..	..	..
Inclination to paralysis,	..	..	..	..	..	..	..	Hyos	..	..	Rhus.	Str.	..	..
Heat, general,	Ac.	..	Bell	..	..	..	..	..	..	..	Rhus.	Str.	..	..
Skin, dry, hot,	..	..	Bell	..	..	Dig.	..	Hyos	..	..	..	..	..	..
Sleep, with snoring,	..	..	Bell.	..	..	..	..	..	..	Op.	..	..	..	..
" " starting,	Ac.	..	Bell.	Bry.	..	..	..	..	..	..	Rhus.	..	Sulp.	..
" " gnashing of the teeth,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Inclined to sleep, but not able,	Ac.	..	Bell.	..	..	..	..	..	..	..	..	..	Sulp.	..
Sopor,	..	..	..	Bry.	Cup	..	..	..	..	..	..	..	..	..
Delirium,	..	..	Bell.	..	..	Dig.	Hell.	..	..	Op.	Rhus.	Str	Sulp.	..
Passionate,	Ac	..	Bell.	Bry.	..	..	..	Hyos	Iod.	..	..	Str	..	..
Stupid,	..	..	.	Bry.	..	..	..	..	..	..	..	..	..	..
Inclination to run away,	..	..	Bell	..	Cup	..	Hell.	..	..	Op.	..	Str.	..	..
	Ac.	..	Bell.	..	..	..	Hell.	..	..	..	..	..	..	..

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