is, as a rule, very important for such persons. Mental and emotional excitement should be avoided; but tranquil, even engrossing *occupation* will be beneficial. For hysterical paralysis, electricity is said to be generally useful. Cold bathing, especially the shower-bath or sea-bathing, when followed by reaction, will do good. Feeble and delicate persons should, however, be careful not to remain in the bath too long. In the surf, for example, a bath of five, ten, or fifteen minutes may be of great service, when a longer time would do real harm.

NEURALGIA.

Definition.—Pain, without inflammation or other disorder, except that of the nerve or nerve-centre involved; literally, *nerve-pain.*

This may affect any of the sensitive nerves. It is also sometimes referred to parts which have in health no sensibility, as the heart, stomach, etc. Different names are given according to its site. Thus, *tic douloureux* is facial neuralgia; *hemicrania*, that affecting one side of the head; *sciatica*, that of the hip; *gastrodynia*, neuralgic pain in the stomach; *pleurodynia*, in the side. Angina pectoris is chiefly a neuralgic affection of the heart.

The pain is generally acute, shooting, or darting, with tenderness of the part upon pressure. There is, however, no heat nor swelling, nor throbbing of the bloodvessels in pure neuralgia. Complicated cases occur, in which inflammation and neuralgia exist together; and inflammation of the fibrous neurilemma may be the immediate cause of the neuralgic pain. The periodical cephalalgia (sick headache), which some persons are subject to nearly all their lives, and the tendency to which may be hereditary, is not a *pure* neuralgia; but the pain in it is probably seated in the cranial nerves, not in the brain.

Pathology.—At least three sources of this sort of pain are possible. 1. Local disease affecting a *nerve;* 2. A morbid state of a sensorial *nerve-centre;* 3. A morbid condition of the *blood.* Neuralgia always fixed or returning in the same spot is likely, although not certain, to depend upon a fault in the nerve itself; as, *e. g.*, *neuroma* (tumor of a nerve). Radiating pain (although possibly of reflex origin) must involve at least part of a nerve-centre. Flying pains, never long seated in one part of the body, mostly are due to a defect or morbid poison (as that of gout or malaria) in the blood.

Treatment.—This must, of course, depend upon the cause or nature of the case. *Tic douloureux* often depends upon decay of the teeth; if so, they must be attended to. Other purely local neuralgias require local treatment. Even division of the affected nerve is sometimes, but should rarely be, resorted to. Laudanum or paregoric, applied by saturating a rag and laying it upon the part, covered by oiled silk to prevent evaporation, is an efficient local anodyne. So is chloroform, similarly applied; it is very pungent, burning like mustard. Sinapisms will sometimes relieve promptly. Mere warmth, as of flannel steeped in hot water, will do so in some instances. I have heard of the pain disappearing

upon the application of half of a cut lemon to the part affected. The Chinese use oil of peppermint, locally applied. Dr. Wright asserts[1] that this oil is a good local anæsthetic. Drs. Buzzard and Anstie have found great benefit from the constant galvanic current.[2] On some portions of the body, the locally anæsthetic action of carbolic acid[3] may be available. I prefer it to be diluted more or less with *camphorated oil.* Dr. Kennion[4] asserts that neuralgic (and other) headaches may be relieved by the application, to the temple or behind the ear, of a solution of bisulphide of carbon. Dr. Horvath's observations[5] on the production of anæsthesia by alcohol at a very low temperature(—5° C.) may probably be utilized for the treatment of some neuralgias. Equal parts of chloral hydrate and camphor, intimately mixed (Lenox Browne),[6] make a fluid reported to be useful as a local anodyne application. It may be painted on the part, and allowed to evaporate. Winternitz and others have relieved *tic douloureux* by the local application of *ice.* *Deep* injection of chloroform is recommended for bad cases by Drs. Bartholow and Mattison. Rubbing for a few minutes with saturated tincture of aconite root, until the skin tingles; or the application of ointment of veratria (gr. xx in ℥j of lard) may be used in severe cases. In the most obstinate ones, a blister may be applied, dressed, after removal of the cuticle, with two grains of acetate of morphia, diluted with ten grains of gum Arabic. Or, most prompt usually of all, solution of morphia may be hypodermically injected, to the amount of one-fourth drachm to one drachm at once. Sometimes the inhalation of ether, nitrous oxide, or chloroform is resorted to, for the relief of intense neuralgic pain. Debility predisposing to it, in some cases warm food, or moderate doses of an alcoholic stimulant, will give relief. On the other hand, *hemicrania* has sometimes been cured by the local application of leeches.

Of anodynes internally used, belladonna has, for neuralgia, the greatest reputation. It will not quell suffering so directly as opium or morphia, but it has been thought more entirely to do away with the neuralgic state. For this, however, *iron*, especially in combination with quinia or strychnia, is the most effective medicine. Cases of neuralgia which will not be benefited by iron are decidedly exceptional. Larger doses of it are generally recommended for this than for other diseases requiring chalybeates. Quinine is particularly wanted in neuralgias of malarial origin (very common); and strychnia or nux vomica in those whose obstinate persistence depends upon great loss of nervous energy. *Muriate of ammonia* (chloride of ammonium) is recommended by Anstie and others. *Aconite* may be very effective, but requires care in its employment. Five-drop doses of the tincture have been given safely in severe cases. *Hydrate of chloral*, in doses of from five to fifteen grains

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[1] Lancet, Nov. 19, 1870.
[2] The Practitioner, June, 1871. Dr. Buzzard used a constant current from ten or fifteen cells of a Weiss's battery.
[3] Bill, Am. Journ. Med. Sciences, Oct. 1870, p. 573.
[4] Brit. Med. Journal, June 13, 1868.
[5] Centralblatt für die Medicinischen Wissenschaften, 1873.
[6] Brit. Med. Journal, March 7, 1874.

or more, is a useful anodyne; more powerful, however, in producing sleep than in relieving pain. *Croton chloral hydrate* has been given, in one or two grain doses (Liebreich, Falconer) beneficially in sciatica. Oil of turpentine is said (Begbie)[1] to be especially remedial in periodical *cephalalgia*. Dr. S. M. Bradley,[2] of Manchester, England, recommends, in feeble cases, phosphorus, in $\frac{1}{20}$ grain doses, dissolved in ether. It will be safer to begin with smaller doses, watching the effect. Everything that recuperates, as generous diet, change of air, sea-bathing, etc., will assist in curing neuralgia, when it is connected, as it so often is, with anæmia and broken health.

Sick headache is evidently mainly a *neurosis*, and yet the pain is not always of a neuralgic character. In some persons a hereditary proclivity to it appears. Certain women, especially, are subject to attacks every one, two, or three weeks (though seldom at regular intervals) from puberty to the cessation of the menses. Relief of such attacks by treatment is often difficult to obtain. Early retirement to bed is mostly requisite. If acidity of stomach, or nausea, be present, magnesia, or bicarbonate of sodium, or blue pill, may be useful. As nervine remedies for sick headache, quinine, *guarana* (10 to 15 grains at once), and *monobromated camphor* (from 2 to 5 grains) have been much lauded; but they will often fail of the desired effect.

Odontalgia, toothache, is sometimes purely neuralgic. More often, it results from exposure of the nerve by the decay of the tooth. Again, it may attend *inflammation* of the jaw, or abscess at the root of the tooth affected. For toothache from *exposed nerve*, *creasote* is a certain remedy. Insert carefully into the hollow a plug of cotton, wrapped over the end of a knitting-needle and dipped in pure creasote. If the latter run out into the mouth (which should be avoided if possible) rinse it at once with cold water. Oil of cloves, tobacco smoke, raw whisky, and acetate of lead, introduced into the hollow of the tooth, will also generally give relief.

DELIRIUM TREMENS

Synonym.—*Mania a potû.*

Symptoms.—Sleeplessness, debility, tremors, horror, hallucinations; often with loss of digestive power. The *insomnia* is a cardinal symptom; if the patient sleeps a whole night he recovers. Debility varies in degree in different cases; in a first attack it is not always great. Tremor is nearly always present. The illusions of the patient are wonderfully real, and usually dreadful. He is pursued by demons or beset by mortal enemies; he cannot bear to be alone, especially in the dark. Sometimes, however, the visions are indifferent, or even amusing. The patient may suppose himself to be well, and engaged about his usual avocation; going through all its movements in pantomime, though with empty hands.

After several days and nights of sleeplessness, prostration

[1] Edinburgh Med. Journal, July, 1871.
[2] British Med. Journal, Feb. 28, 1874.

usually increases; the skin grows cold and clammy, the voice feeble, and the patient no longer inclines to move about. Death must result if sleep be not obtained within a week, or, at the most, two weeks. In favorable cases, a sound sleep of many hours comes on within three or four days; the patient then wakes up rational and well.

Causes.—There is no room for doubt that this affection may come on under two different conditions or circumstances: 1, where stimulants are suddenly withdrawn from one accustomed to them; and 2, while their use in excess is continued. The second class, according to my observation, furnishes the most dangerous cases.

Treatment.—Old as this disease is, it is yet the subject of great difference of opinion. The practice which early training led me to adopt, consisted in the *moderate* use of stimulants ("tapering off") and of opium, with concentrated liquid nourishment. If the patient were not much prostrated, I would give only ale or porter, a bottle or two in the day; with hop tea *ad libitum*, and a grain of opium every three or four hours. The latter would be increased, if sleep were delayed, to a grain every two hours; or, as a maximum, a grain every hour. Very weak cases, accustomed to spirits, might have a tablespoonful of whisky or brandy every four, three, or two hours, according to their condition. Beef-tea and mutton-broth, etc., seasoned with red pepper, are preferred as diet. In an obstinate case, I have seen sleep follow the raising of a blister upon the back of the neck. Substituting valerian for opium, or combining the fluid extract or tincture of valerian with morphia solution, has answered well in some cases. [F. 144, 145.] Injection of laudanum into the rectum is occasionally resorted to.

Other modes of treatment have recently been urged.[1] 1. The *expectant* treatment of Drs. Dunglison and Laycock; giving only strong food without stimulants or opium. 2. The treatment of Mr. Jones of Jersey, by tablespoonful doses of tincture of digitalis. 3. That by the internal use of chloroform, in one or two drachm doses; or equivalent amounts of hydrate of chloral.

The expectant treatment will no doubt do very well in mild or moderate cases. From what I have seen, I should fear to trust to it in severe or threatening ones.

The digitalis treatment, bold as it seems, has a good deal of positive testimony in its favor. Dr. A. Wiltshire, for instance, reports[2] five cases cured by half-ounce doses of the tincture of digitalis. Why not try, as some do, less immense and yet large doses; as, half a drachm or a drachm, instead of half an ounce, of the tincture every three or four hours? Dr. Sanders, of the Royal Infirmary, Edinburgh, has found half-drachm doses to do very well in severe cases.

Dr. E. McClellan and others have recently reported excellent success with one or two drachm doses of undiluted chloroform.

[1] Dr. Sutton is the supposed author of the opium dogma (sleep or die) in delirium tremens. Dr. Ware, of Boston, N. E., first protested against its necessity, 1825-30.
[2] Lancet, Aug. 27, 1870.

The corrugated stomach of a spirit-drinker will probably bear the pungency of chloroform better than another's. Generally only one or two such doses of it are said to be required. My experience with the internal use of chloroform leads me to believe such practice perfectly safe at least. It is worthy of further trial.

Dr. Peacock, of St. Thomas's Hospital, London, reports well of bromide of potassium in delirium tremens.

Hydrate of Chloral, from its great power as a hypnotic, deserves careful trial in this disorder. It has already been very favorably reported upon by a number of physicians both in Europe and in this country. Its dose in delirium tremens should be usually from 30 to 40 grains, repeated, if necessary, every half hour for three or four times.

Dr. Lyons and others speak highly of the effects of *capsicum*, in 30-grain doses. Mr. Hewitt, of Dublin, has cured one case by the application of the ice-bag to the spine.[1] Packing in a wet sheet is sometimes followed promptly by sleep and recovery.

The large majority of first attacks of mania a potû are curable. Third and fourth attacks are often fatal, or are followed by permanent insanity.

APHASIA.

Loss of speech may occur as one of the symptoms of disease of the brain, either functional and transient, or organic and irremovable. Such a loss of *language* is termed (Bouillaud) *aphasia*. Importance has been given to it lately by the observations of Trousseau and others, and resulting speculations (Dax. P. Broca) as to the seat of the faculty of speech. Not articulation, as in aphonia, but *expression* is, in this affection, wanting. The power to *write* words from memory, to convey meaning, is lost; but, in some cases, at least, they may be *copied* correctly. *Thinking without words* may go on in such instances; as Lordat recorded, after recovery, in his own case. In certain cases, especially in hysterical persons, the loss of speech appears to be "spasmodic" or functional, without permanent disease of the brain.

Hemiplegia of the right side has in a number of examples coincided with aphasia; and, several times, also, autopsy has shown softening or other lesion of the left anterior portion of the cerebrum. On the suggestion of these facts an hypothesis has been based, that the site of the faculty of language is in the third anterior frontal convolution of the left hemisphere of the cerebrum. This is a very *unphysiological* supposition, in view of the *symmetry* of the cerebro-spinal axis throughout; nor does this objection disappear even upon the conjecture that the "organ" upon the right side may exist always in an undeveloped state. A remarkable case has been reported,[2] in which impairment of speech followed a severe injury of the *right* cerebral hemisphere. A number of instances of a similar kind, adverse to Broca's theory, have been collected by Dr. J. W. Ogle.[3] Valvular lesion of the heart some-

[1] Dublin Med. Press and Circular, April 22, 1868.
[2] Western Journal of Medicine, March, 1868.
[3] London Lancet, March 21, 1868. See also Dr. Wadham's case, St. George's Hospital Reports, 1869; and one reported by Dr. Echeverria (N. Y. Medical

times accompanies aphasia. Embolism is possibly an occasional cause of it. Dr. H. C. Bastian[1] divides the cases into *aphasia*, when the patient can think, but cannot speak or write; *aphemia*, when he can think and write, but not speak; and *agraphia*, when can think and speak, but not *write*.

Cases of aphasia are rare. I am not aware of any special measures of treatment for it pointed out as yet by experience. Dr. Osborne recommends (having succeeded with it in one case) teaching the patient to speak anew, as is done in infancy. While this can have no effect upon the cerebral lesion, it may much diminish, in some cases, at least, the inconvenience of the resulting symptoms.

METHOMANIA.

Definition.—The disease of uncontrollable or irresistible intemperance.

Synonyms.—*Dipsomania*; *Oinomania.*

Varieties.—*Periodical* or paroxysmal, and *chronic* or persistent methomania. The subject of the first may be temperate for weeks or months, and then will abandon himself to violent excess for some days or for a week or two. The persistent methomaniac is constantly intemperate, so long as the opportunity exists.

Causes.—Hereditary proclivity exists in many cases. Wilful or unwise excess is the cause, of course, of intemperance in every case. To designate it as a disease is not at all to deny the accountability of those who voluntarily incur it; only, thus, its true character of *uncontrollableness* (in many instances) by the will is indicated. That any intrinsic power exists in alcohol employed for its *proper needs* as a medicine, and in proper quantities, to bring on intemperance, I do not believe. I have known too much of its use in practice in low fevers, in phthisis, and many other conditions of debility, not to be sure that it is only when used in *excess*, or out of place, that any hankering or slavish demand for it is begotten.

Treatment.—No safety exists except in *seclusion for a year or two*, where the individual cannot obtain stimulus, and is not made by company or opportunity to desire it. Laws should be passed (in Pennsylvania, and in some other places, such laws do exist) by which every person, proved upon inquiry before a commission to be habitually intemperate, should (like a lunatic) be deprived of the control of his liberty and property. Then, in every community there ought to be institutions where a safe and homelike retreat could be had for a sufficient time to restore self-control; which, I repeat, ought to be never less than a year; better two years. Several such institutions have now been in operation for a considerable number of years. The success so far obtained in these retreats has been quite enough to justify fully their establishment and support near every large city.

Record, March, 1869), in which post-mortem examination revealed sclerosis of both third anterior frontal convolutions, without symptoms of aphasia having occurred.

[1] Brit. and Foreign Medico-Chirurg. Rev., January and April, 1869.

INSANITY.

Definition.—Loss of control of the will over the mental faculties or impulses; intellectual, or emotional, sensorial derangement.

Varieties.—1. **Mania**; acute[1] and chronic; also divisible into intellectual insanity or *delusion*, emotional or *moral* insanity, and illusional derangement or *hallucination*. 2. **Monomania**, or partial insanity; *e. g.*, homicidal and suicidal; *kleptomania*, or insane propensity to steal; *erotomania* (satyriasis, nymphomania), or uncontrollable amatory desire; *pyromania*, morbid propensity to commit arson, etc. 3. **Melancholia**. 4. **Dementia**; *i. e.*, total wreck of the faculties, or imbecility. **Idiocy** is congenital imbecility.

Premonitions.—By noticing these, often *prevention* may be suggested and effected. Hardly any of them alone may be sufficient, while altogether they become so. 1. Headache, not accounted for by ordinary causes, and continuing for days or weeks together. 2. Irritability of temper, not previously habitual. 3. Unnatural hilarity without occasion. 4. Depression or gloom, not justified by any event. 5. Alternations of excitement and despondency, both extreme. 6. Any great modification of the natural temper or habit of mind, so that the individual becomes the opposite of his usual self. 7. Dislike or distrust of near friends and family, without any reason for it.

Diagnosis.—Alienation from his own accustomed character and disruption from rational and harmonious relations with persons and things around him—these are the cardinal elements of the insane state. This, all authorities admit to be more easily detected or discriminated than defined. The old legal test, that the lunatic must be incapable of knowing right from wrong, must be given up; as very many cases of emotional or "moral" insanity are proved to exist, in which, with full knowledge of right and wrong, the morbid impulse is irresistible by the will. There is no *physical* test of insanity by the pulse or otherwise; as in chronic mania, etc., all the organic functions may go on normally. The expression of the face is, it is true, nearly always unnatural. Perhaps the greatest difficulty sometimes exists in monomania, unless one knows the peculiar delusion or morbid proclivity of the patient, as upon all other matters he may be sound. *Feigned* insanity is generally overacted; sometimes it may require the skill of experts to expose it. Not unfrequently *anæsthesia* may be used to advantage in effecting this exposure.

Prognosis.—More than half of first attacks of insanity, under good management are recovered from. With each repetition, the hope grows less; and so it does, also, in proportion to the *duration* of chronic mania. Sometimes, however, cures occur of those who have been insane for years. Dementia is a common, and generally hopeless, termination of prolonged chronic mania or melancholia. Puerperal mania is curable in a large majority of cases. Ordinary acute mania varies in duration from a week or two to several

[1] Puerperal insanity is one form of acute mania.

months. Its worst form is the "acute delirious mania" of authors; sudden, chaotic, and prostrating. It may end either in recovery, in lapsing into chronic mania, in dementia, or even in death during the attacks. *Periodical* insanity is occasionally met with, especially in females.

Causes.—These are numerous. The principal ones are hereditary predisposition, injuries of the head, intemperance, reverses of fortune, loss of friends, and domestic troubles.

Pathology.—Much yet remains to be learned of this. Subtle alterations of the brain-structure are still to a considerable extent unrecognizable, even with the aid of the microscope. Two elements in the pathology of insanity have been distinctly made out: cerebral *hyperæmia*, which predominates in the more acute cases, and *atrophy*, which is (either quantitative or qualitative) present in nearly all those which are chronic.

Dr. J. B. Tuke[1] asserts that, of all portions of the brain found altered after death in those dying insane, the *corpora striata* are most frequently, and the cerebellum the least often, affected.

For the **treatment** of insanity it is proper to refer to special treatises upon the subject. (*See* Bucknill and Tuke or Blanford, on Insanity.) The advice of a physician in nearly every case ought to be, early removal to a well-conducted asylum or hospital for the insane. There, security and the prospect of recovery will be much better than at home amongst the kindest of friends. In the treatment of insanity, in recent times, while the use of medicine (especially tonics and hypnotics) is not neglected, the tendency is to confide a great deal in moral or mental treatment; *i. e.*, the aggregate of personal, local, and circumstantial influences, which in an asylum can be arranged especially with a view to the most favorable effect upon its inmates. The placing of insane patients, not violent, under the care of private families (as at Gheel) has recently been found sometimes productive of beneficial results. But the abandonment of the hospital plan (with which the other can be combined) altogether, in favor of this, would be, no doubt, as great a mistake as the often urged (Gardiner Hill, Conolly) *total* abolition of mechanical *restraint*.

HEMORRHAGES.

Varieties.—1. Active; 2. Passive; 3. Traumatic; 4. Symptomatic; 5. Critical; 6. Vicarious. Local hemorrhages are also classified according to the organ from which the blood escapes.

Active hemorrhages are those in which determination of blood in excess to the part precedes the bleeding. **Passive** hemorrhages, those in which from inaction of the circulation, or passive dilatation of bloodvessels, congestion occurs; or in which the coats of the vessels give way too rapidly, partly from the blood itself being incapable of maintaining properly their nutrition. The idea of bleeding by "exhalation" without rupture at least of capillaries, is now abandoned.

[1] Medical Press and Circular, Aug. 16, 1871.