

THE
BOSTON MEDICAL AND SURGICAL
JOURNAL.

VOL. XV.]

WEDNESDAY, SEPTEMBER 7, 1836.

[NO. 5.

TREATMENT OF CHOREA AT THE "HOPITAL DES ENFANS
MALADES," PARIS.

CHOREA, or "St. Vitus's dance," as it is popularly called, is a disease which very seldom terminates in a fatal manner, and it is only occasionally—at very distant intervals—that children laboring under this affection are cut off by some supervening malady. We have had occasion to observe only two necropsies of children who have died while affected with chorea, and the results of an examination were completely negative. The symptoms of chorea are well known to all practitioners who have had the slightest experience in the diseases of children; we shall not therefore recur to them here, or to its treatment. The remedies which have been at different times employed in chorea, are very different. Since the time of Drs. Hamilton and Parr, purgatives have, we believe, been the favorite remedies with English practitioners, who, amongst the multifarious accidents which they attribute to disorders of the digestive organs, foul bowels, constipation, &c., rank also chorea sancti viti. It is the opinion of Underwood that it should be so ranked, and of his last "editor," who seems inclined to superadd want of tone in the system. We do not mean to assert that certain cases of chorea may not depend on irritation of the intestinal canal, for such we suppose to be the translation of "foul bowels" into medical language; but we are strongly inclined to regard the opinion as erroneous, which would attribute chorea in a general manner to derangement of the digestive system. On the contrary, we are disposed to consider it as essentially a disease of the nervous centres, occasionally depending on irritation, but in a vast majority of cases produced by causes whose influence we are not yet sufficiently advanced to be able to appreciate. Purgatives are employed, it is true, with considerable success in the treatment of chorea; hence certain writers, and a great number of practitioners, draw the very illogical conclusion that chorea depends upon "worms, foulness of the bowels," &c., and that we must torment our patient with a course of mercurial or aloetic purging. If a large number of cases of chorea be cured by the purgative method, it is because chorea, like certain other nervous affections, yields, generally speaking, to any strong impression made upon the system, and not because the disease depends immediately on disorder of the digestive function, removed by aloes or calomel. We are induced to make this assertion, which will probably appear heterodox to many disciples of the purgative school, by the fact that we have seen a vast number of cases of chorea (of all descriptions, and taken indis-

criminate) treated by the simple means of cold effusion, and with the most happy results. For the last five years baths have been the favorite remedy at the *Hopital des Enfants Malades*. They are administered under various forms; cold-baths at the ordinary temperature, immersion-baths at 15 degrees, and sulphureous baths. MM. Jadelot and Guersent, who have the care of the scrofulous patients during the winter months, and do not take charge of the acute wards before the arrival of summer, are in the habit, the former, of employing cold-baths, the latter, immersion-baths.* Whenever any apprehension is entertained of the existence of bronchitis, either in the acute or chronic form, M. Guersent replaces the immersion-baths by sulphureous baths, a remedy proposed about four years ago by M. Baudelocque, who has since continued constantly to employ them. The sulphur-bath is composed by adding about 4 oz. of the sulphuret of potass to a common bath, in which the patient is placed for an hour. Fifteen to twenty baths are in most cases sufficient to remove the disease. Thus, from the month of September 1832 to the month of January 1833, fourteen girls were treated exclusively with the sulphur-baths, one every day excepting on Thursdays and Saturdays. Of these fourteen, thirteen were perfectly cured, and the mean duration of the patients' sojourn in the hospital was only twenty-four days. We doubt if any other method can furnish such favorable results. Should the disease resist the administration of ten or twelve baths, M. Baudelocque is accustomed to add the subcarbonate of iron interiorly. During the course of the malady he prescribes a substantial diet and a double ration of wine. The ordinary drink of the patient is an infusion of linden leaf and orange flowers. MM. Guersent and Jadelot sometimes administer the oxide of zinc, valerian and meglin pills (composed of *Ox. Zinc et Valer.*) The acetate of morphine has latterly been tried in four cases, but without any advantageous results. Purgatives are given in all cases where constipation exists, or whenever the presence of intestinal worms is suspected; and if there be any symptoms of plethora, some blood is abstracted from the system.—*Lancet.*

TOPOGRAPHY AND DISEASES OF THE COUNTRY OF ASSAM.

BY ASSISTANT SURGEON MC CUSH.

(Concluded from page 58.)

Natural Productions.—ASSAM, with all its wastes and jungles, however much neglected and abused by man, has not been altogether forgotten by Nature, in her distribution of the good things of this life. The tea plant, the coffee, and the plantain, grow wild upon the mountains uncultivated and till of late uncared for. Every individual connected with the welfare of our adopted land, and with the independence and prosperity of the land that gave us birth, must rejoice in the interest which Government has lately taken in the cultivation of the tea plant, and in their following up the praiseworthy exertions of Captain Jenkins, Commissioner for Assam, and Lieut. Charleton, who ascertained its positive

* We call an "immersion bath," one into which the child is plunged four or five times successively, instead of being placed in the bath for a certain time.

existence in the British dominions and brought it seriously to public notice. Yes ! the genuine tea plant grows as favorably upon the hills of Upper Assam, as in the adjoining provinces of China, and it only requires the same attention to be bestowed upon its culture and manufacture, to secure the same blessing to ourselves and our country, which has for such a series of years so materially added to the revenues of the Chinese Empire.

It is a consummation devoutly to be wished for, that the Government of India will spare neither trouble nor expense in trying what can be done by a well arranged tea plantation, on a pretty extensive scale. The distance of the tea district from Calcutta, though great, will be easily surmounted when such a noble river as the Burhampooter is always open for boats of the largest burden, even to the base of the mountains where the tea grows ; nor ought this consideration to be forgotten, that in the event of complete success, of which there can be so little doubt, they may eventually turn one of the richest streams of commerce into their own gardens, and cope with or even excel the Chinese themselves in one of the most valuable articles of European luxury.

The coffee plant could perhaps be turned to no less advantage than the tea, and would require still less care and attention. On the hills around Gowalparah it grows as abundantly as the heath on the British mountains, and continues in blossom a great portion of the year, giving the hills the appearance of being covered with snow. Though but a small plant in its natural state and seldom higher than eighteen inches, yet when cultivated it grows to the height of five or six feet, and so stout as to form a walking stick. In its wild state it is not very fruitful, bringing but few berries to perfection ; but by proper gardening it might be made as productive as the domestic coffee.

The ratan grows wild throughout Assam, and so luxuriantly as to form the most impenetrable of all jungles. Though not equal to that of the Eastern Archipelago in point of strength and beauty of polish, it is still a most valuable acquisition to the natives, and when split into withes is converted into every use, from that of a rope to a thread, and seems to answer all the purpose as well, and sometimes better. The main stems, some of which are two hundred feet long, though little thicker than the finger, are in mountainous passes wrought into suspension bridges, and the rind of the spine of the leaves is extensively used for making mats.

India rubber, or caoutchouc, is procurable from a tree in the forests, but it is of inferior quality. The strawberry, with a single yellow flower, is indigenous, but dwarfed in size and destitute of flavor. The tribe of ferns, so rare in most parts of India, are very numerous, and many of them very beautiful. Fig trees form a large share of the vegetation, but the fruit of none of them is eatable. There is a countless variety of creepers upon the hills, whose beauty and perfume would render them valuable acquisitions to the bower or the parterre. The variety of Parasite plants is numerous and interesting. The betel nut palm is cultivated to a large extent about most villages ; but the cocoa, the date, and palmira are rare. At Gowalparah there is a most singular instance of a

betel nut tree giving out shoots and saplings. The main trunk is about ten feet high and in good health, though not yet arrived at maturity. A bud or shoot, about the size and appearance of a good-sized onion when beginning to sprout, is situated on each of the three lowest rings of the trunk, and from amongst the roots around the stem, spring nine or ten thriving saplings, from one to six feet high. This vegetable phenomenon attracts a great deal of the attention of the natives, and is believed by them to be the certain prediction of some piece of great good fortune befalling the possessors.

Fruit trees of all kinds, with very few exceptions indeed, do not at all thrive in Assam, and are seldom or never brought to perfection; either the roots are eaten up by the white ants, or the bark becomes cankered and diseased, or the leaves are gorged by insects; and before the abortive fruit is half ripe, it is filled with worms and uneatable. Even those fruits which might be considered indigenous, as the fig and the mangoe, share the same fate, with the peach, the pear, the plum, and the apricot.

Animals.—Compared with those of most other jungly countries, there is scarcely any peculiarity in the animals of Assam. Wild elephants are plentiful, and move in large herds. Great numbers are caught every year, and transported to other countries; but the speculation is very precarious, as many of them die before they are domesticated. A few are shot in their wild state, merely for their ivory. They are frequently very dangerous, and many of the natives are annually killed by them.

The rhinoceros inhabit the densest and most retired parts of the country. The young ones are a good deal looked after, but so difficult to be found, that a party with two or three elephants do not succeed in catching above one or two in a season, and these when caught frequently die in the nursing. The mode of taking them is first to shoot the mother, and then the calf is easily secured. Frequently the mother, in her dying agonies, lays hold of her young one with her teeth, and lacerates it so severely that it dies of its wounds. In those books of natural history, of which I am in possession, the *rhinoceros Indicus* is described as having no canine teeth; but on inspection of a skull a few days ago, I found two very stout canines, one on each side of the two incisors of the lower jaw. The upper jaw was so incomplete that I could determine nothing respecting their existence in it. The old rhinoceroses are frequently killed for the sake of their horns alone, to which the natives attach a great deal of sanctity; so much so, that the general belief is, that there is no more certain way of insuring a place in the celestial regions, than to be tossed to death on the horn of a rhinoceros. These horns are as hard as bone, very stout and broad at the base, and seldom longer than eight or ten inches. They have a slight curvature towards the forehead, and in color are as black as the buffalo's. The horn is not a process of the bones of the nose, but united to them by a concave surface, so as to admit of being detached by maceration, or by a severe blow. It has no pith, but the centre is a little more cellular than the rest. Considering the wild and sequestered habit of these animals, it is surprising how very easily they are tamed. With a little training, a young one, a few months after being caught, may be turned

loose to feed, and be ridden by children. They contract a strong affection for their keeper, come at his call, and follow his steps wherever he goes.

Tigers, leopards, and bears, are numerous, but though they occasionally carry off a bullock, accidents to human life are rare. There is a reward of six rupees a head allowed by Government for their destruction. Certain castes adopt this as their profession, and make a good livelihood by it. They destroy them by means of poisoned arrows. Having found out a recently frequented track, they fix a strong bamboo bow (a modification of the cross-bow) horizontally, upon three forked sticks, driven firmly into the ground, and just so high as to be on a level with the tiger's shoulder. The bow being bent and the poisoned arrow fixed, a string connected with the trigger is carried across the path in the same direction with the arrow and secured to a peg. The tiger in passing along comes in contact with this string, the bow is instantly let off, and the arrow is lodged in his breast. So very active is this poison that the animal, though not otherwise mortally wounded, is commonly dead within one hundred yards of the place where he was struck.

Wild buffaloes abound in all parts of Assam. They are not much sought for unless by some classes for eating. They are too fierce and formidable to be robbed of their young with impunity ; and as they are seldom found solitary like the rhinoceros, the calves could not be secured even at the expense of the parent's life. It is the common practice to breed from the wild buffaloes ; no males are kept by the feeders : the tame herd is driven towards the jungle, where they are joined by the wild males, who continue in the flock during the season.

Of all the animals that roam the forest, not even excepting poisonous serpents and beasts of prey, the buffalo is the most formidable, and the most to be dreaded when defenceless ; and more inhabitants are destroyed by his gore than by all other animals put together. Scarcely a month passes without some person being attacked in this district and gored to death. A man was lately brought in to me with the whole of his stomach protruding through a small wound in the epigastric region. The horn had entered the stomach, and a small hole existed, like the mouth of a purse, into which I could introduce my finger. He had two other wounds in his body, both of which seemed mere scratches ; but one of them entered the thorax, and the other the abdomen. He had been gored the day before I saw him, and been conveyed from a distance on a hurdle ; but with all my care he died next morning. The only thing remarkable in this case was his living so long with wounds in such vital parts.

Climate and Seasons.—There is a greater equality of temperature in Assam, whether during the 24 hours, or throughout the year, than is general throughout India, the average of Fahrenheit ranging at noon, through the last year, from 63 to 85 degrees.

The hot weather is much more moderate and endurable : there are no hot winds, and a tattie is unknown. The nights are cool and refreshing, and a punkah is but seldom put in motion. It must be allowed that the cold weather is not so cold and bracing as in the Upper Provinces ;

during November, December, and January, intense fogs prevail, impenetrable to the sun's rays, till 11 or 12 o'clock. February, March, and April are the most agreeable months in the year, and during that season decidedly preferable to most other provinces. So cool and congenial is the temperature during April, that warm clothing is still in use. Very violent storms are frequent during April, May, and June, accompanied with tremendous thunder and lightning, and by hail showers and torrents of rain. Though very awful, and frequently very dangerous, these tornadoes are grand and sublime in the extreme; and few phenomena of nature excite a stronger sensation of interest, or gratify the observer with more majestic conceptions of the "war of elements," the wreck of matter, and the crush of worlds. One afternoon while watching the progress of one of these syphoons, I seemed literally enveloped with lightning as if the electric discharge had taken place at my feet. A few minutes after I heard that the house of a writer, about one hundred and fifty yards from where I stood, had been struck. On going thither I found that the electric fluid had penetrated the thatch, descended by a post in the wall, and on reaching the floor had separated into two parts, diverging in opposite directions. The mat walls were torn to pieces, everything in the house was turned upside down, above a dozen yards of earth were ploughed up to a depth of three or four feet, large stones were splintered, and the fragiments tossed to several yards distance. The hole in the thatch presented the same appearance as if an 18 pound shot had entered, but without any trace of combustion. The writer was in the house at the time, and farther than being bespattered with mud and pretty well frightened, received no injury whatever.

Assam is quite uninfluenced by the changes of the monsoon; the wind blows from the east for more than nine months in the year, and seldom from any other direction for more than a few days at a time. At the commencement of the rain it frequently blows from the west for four or five days in succession; these westerly winds are always hotter and more unpleasant than the easterly, and are as unwelcome as the east winds in the Upper Provinces during the hot winds.

The rains set in very early in Assam, commencing in the beginning of April; nor are they sooner over on that account, but continue till the middle of October, thus prolonging the rainy season to half the year. This long continuance of the rains, together with the heavy fog of the cold weather, renders the atmosphere extremely moist, and salt, saltpetre, and even sugar, melt, and dissolve into a liquid.

About the first of July the Burhainpooter is swollen to its full height, and the whole country is an inland sea. Whole herds of wild animals, no longer able to maintain their ground upon the islands where they had grazed during the dry season, then commit themselves to the tide and swim stoutly for shelter to the neighboring hills. It is quite astonishing how rapidly they do swim, and to what a distance; but animals of all kinds, domestic as well as wild, are denii-amphibious, yet with all their strength of sinew and agility, many of them cross the boundless flood in vain. The inhabitants are constantly on the look-out for such prizes, and with well-manned canoes dash out into the stream and spear them

before they can get to shore. Nor is their sport altogether unattended with danger ; an elephant or a buffalo is nearly as formidable in the water as out of it ; even a deer or a hog is not to be run down with impunity ; the boats are frequently upset, and sometimes fatal accidents ensue.

The rainy season may be called the carnival in Assam ; all the labors of the field are suspended, every one seems happy and contented, and lives luxuriously upon launches of venison, or steaks of the hog or buffalo. The flood of Ducalion is realized in a great measure every year. The timid deer, exhausted with long swimming and fatigue, is glad to take shelter in a cow house or a cottage. The tiger and the buffalo swim together in amity ; and the elephant and her young with the wild hog and her sucklings. The native anchors his boat to his own roof-tree ; performs his ablutions on his flooded hearth, and drags his net in his tobacco garden ; where the oxen lately ploughed, they are swain in droves across to higher pasture ; where a field of thriving grain a short time before waved in the rising sun, nothing there waves but the muddy water ; the sites of large villages are known only by their roofs above the stream, and the situations of others are pointed out only by a few palm trees weeping over their drowned and deserted foundations.

Earthquakes.—Earthquakes are of frequent occurrence in Assam, and hardly a month throughout the year passes without one or more convulsions. Between 1st May 1834, and 1st May 1835, we have experienced no less than 12 shocks, viz. on the 1st July, 3d August, 6th August, 30th September, 19th October, 6th November, 8th January, 6th February, 11th February, 23d March, and 30th April. The two last were very violent and lasted about one minute. They were much more severely felt farther up the Burhainpooter, I am told, than at Bisnauth. Their progress was marked by an undulation of the earth's surface like waves upon the ocean ; in some parts the ground opened, and water gushed through the fissures. They all proceeded from west to east with a subterranean noise like a loud clap of thunder.

These earthquakes produce the greatest alarm amongst the natives. The moment one is heard, every soul rushes out of the house into the street, and a universal shout of terror is raised and continued till all is again quiet.

These earthquakes are seldom accompanied with any serious damage ; they occasionally make a rent in a puckah wall, or throw down a piece of plaster, but rarely do more ; however, there are exceptions to the contrary. About twenty years ago, the natives inhabiting a small knoll near the hill of Gowalparah were so terrified by the unusual shaking of the little hill, that they fled from it for safety, and ran to a distance ; but when they returned, their houses and their hill had disappeared, and a large pool of water, five or six fathoms deep, occupied its place. From all I have been able to learn, this story is perfectly correct. The pool is still known by the catastrophe, and makes one of the finest and most convenient tanks possible.

Salubrity.—I come now to the most important part of this paper, viz. the healthiness of Assam, and as a prejudice has long existed against

it, and some offices have carried this feeling so far as to exact a higher rate of premium on the insurance of lives in that province, I shall endeavor to show on what grounds they do so.

It ought not to be forgotten that all new countries in India, when first taken possession of by the British, have been found unhealthy; nor have they ceased to be otherwise, till a settled state of the country allowed them to abandon these sinks of human life, the possession of which in time of war was of the greatest importance: till too often dearly bought experience enabled them to select stations more congenial to European constitutions; till the new cantonments were cleared of their native pestilential jungle, the swamps drained, and comfortable houses erected. That this was frequently the case on our taking possession of Assam, the tombs "unlettered and unknown," of many brave officers in places long deserted by Europeans, afford melancholy proof. Thus Assam was saddled with a name which even to this day clings to it. It will no doubt be urged that the mortality of recent years justifies its original character, and the lamented names of Scott, Nousville, Biddingsfield, Boulton, Beadon, Leslie, Brodie, and Carthcart, will be adduced as evidence incontrovertible. But so far as climate is concerned, these casualties might have occurred in most parts of India.

So much depends upon the selection of a station, that one side of the river may be particularly unhealthy, while the other side is the very reverse. At Joggigopa a considerable detachment was at one time posted, but it proved eminently unhealthy, and though frequently relieved, it generally left one or two officers behind. Yet on the opposite shore of the Burhampooter is the station of Gowalparah, perhaps the healthiest in Assam. With a proper attention to the nature of the country, to the marshes formed by the river, and the prevailing winds, I am convinced that as healthy stations may be selected in Assam as in any part of Bengal Proper. But not to dwell longer on theory, I shall now enter upon a more particular account of this station, and leave it for others to judge of its climate.

Gowalparah.—Gowalparah stands upon the top of an oblong hill about 320 feet high, and nearly three miles round, jutting out into the river so as to be nearly surrounded with water. Indeed, during the rains it is altogether surrounded, and changed into a complete island. The inundated state of the country around the foot of the hill is the less inconvenient, from the most picturesque roads having been cut all round it, and its insular situation has lately been obviated by the formation of a strong bund across a wide nullah, which connects it with the main land. This jutting position of the hill always secures it the fresh breezes of the river, and as the prevailing winds are either up or down the stream, it is for many miles separated from the seat of febrile miasmata. Its height protects it against the intenseogs that brood during the night upon the plains, and which do not ascend the hill till after sunrise. Not the least important advantage Gowalparah possesses, is its abounding with copious springs of delicious fresh water. No small meed of praise is due to the present judge and magistrate, Capt. Davidson, who about

fourteen years ago selected it for a station out of such a country of jhils and jungle.

The following two abstracts, calculated from the monthly reports of the Hospitals from 1st May 1834 to 1st May 1835, will give a fair idea of the sickness at this station, and qualify it for being compared with any others.

Sebundy Hospital.

Average strength of Corps,	- - - - -	262
Do. sick in hospital,	- - - - -	10
Do. sick p. cent.,	- - - - -	3. 81
Do. deaths of sick p. cent.,	- - - - -	2. 52
Death of strength p. cent. p. annum,	- - - - -	1. 14

Jail Hospital.

Average number of Prisoners in Jail,	- - - - -	260
Do. sick in Hospital,	- - - - -	13,3
Do. sick p. cent.,	- - - - -	5. 12
Do. deaths of sick p. cent.,	- - - - -	7. 81
Death of strength p. cent. p. annum,	- - - - -	11. 53

I am aware that a station may be more unhealthy one year than another, and that one year's report would entitle it to be called a healthy place, and another year's report to the contrary; but the above abstracts, so far from showing the sickness of Gowalparah in the most mitigated form, include the ravages of an unprecedented continuance of cholera, which proved fatal in nearly one half of the yearly amount of deaths amongst the prisoners.

The most prevalent diseases amongst the Seapoys are intermittent fever and syphilis. This last disease is excessively common; and frequently more men are laid up by it alone, than by all others put together. Throughout the whole year I had not four cases of continued fever; and yet a great proportion of the Seapoys were stationed at outposts throughout the districts.

Amongst the prisoners, intermittent fever, diarrhoea, and dysentery are the most frequent diseases, and even amongst them continued fever is rare. Great allowances must be made for the mortality amongst that unfortunate class. A large portion of them is composed of old and inferior men, laboring under great depression of spirits, and in despair of ever living to see the termination of their sentence. Many of them are the inhabitants of mountainous countries, accustomed to lead a life as wild and free as the leopard or the tiger, whose chief employment was fishing or hunting, whose drink was intoxicating liquid, and whose subsistence the grossest animal food. The wild animals of their native jungles could not, when caught in a net and caged, feel more impatient of restraint than they do, when loaded with irons and pent up in a Jail. The change of diet from animal food to satiety, with a large allowance of spirituous liquors, to that of rice and water, with a savoring of fish and vegetables, and even all of these in limited quantity, has, in addition to their confinement, the most depressing effect upon them, and were it not that the human stomach can accommodate itself to the digestion

of all kinds of fare, these carnivorous savages would loathe the vegetable meal to which they are, when prisoners, reduced, and die of inanition.
—*India Med. Jour.*

THEORY OF ARTICULATE SOUNDS.

To the Editor of the Boston Medical and Surgical Journal.

SIR—In the course of a few days, I shall endeavor to draw from memory, and send you, a sketch of my Theory of Articulate Sounds, or Analysis of Articulate Sounds, and their External Conformations.

Considering the great intricacy of the subject, the “vast deal of close thinking,” and the immense number of experiments and observations required for its full investigation, *de novo*, you can hardly be surprised that my progress has been so slow; especially when you consider, also, how frequently my inquiries have been interrupted, and how often they have been resumed, after long intervals of forgetfulness.

My experiments and observations amount not only to thousands, but tens of thousands. Merely the General Index to about half of the notes that I have written on this subject, has taken up half a quire of paper. In fact, the index to all these notes would require at least half as much room as the whole work itself, if I should publish. These notes consist of experiments and observations made or proposed, with reasonings upon them—doubts, queries, hypotheses, methods of inquiry, errors, causes of errors, &c.

Since writing the imperfect outlines formerly communicated to you, I have been at great pains to reduce the science of articulation to a simple, comprehensive, connected, and consistent whole. Indeed, it has been my constant endeavor, not only to trace causes, and consequences, and to discover what facts admit of generalization, but to raise, anticipate, and reply to objections. Another object has been, to discover, as far as possible, the causes of the errors into which I have fallen. The causes of error have been many. Some of the *chief* are the following.

1. The novelty of the subject, and the bias of hypothesis.
2. At a given pitch, the same vowel, by a greater or less effort, can be pronounced at almost any external conformation, that is, at almost any given length, or width of the labial aperture. Hence the necessity of distinguishing between a natural and a violent internal conformation. It is only of late that I have become duly sensible of this.
3. What would commonly be called the same vowel, and would therefore, for a long time, be likely to be mistaken for precisely the same, has different forms (as, true and falsetto, slender and full, more or less hard and soft, lingual, labial, and guttural, &c. or two or more of these combined), some of whose *proper* external conformations are very different from each other: and if these different forms of what would be called the same vowel, are liable to be confounded with each other, their different external conformations are much more so.
4. The number of vowels that can be pronounced, and the absolute