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EDITED BY

HENRY F. CAMPBELL, A. M., M. D.,
PROFESSOR OF SPECIAL AND COMPARATIVE ANATOMY IN THE MEDICAL COLLEGE OF GEORGIA;

AND

ROBERT CAMPBELL, A. M., M. D.,
DEMONSTRATOR OF ANATOMY IN THE MEDICAL COLLEGE OF GEORGIA.

Medical College of Georgia.

"Je prends le bien où je le trouve."

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**Some of the Effects of Alcohol upon the Physical Constitution of Man.**

By J. P. Stevens, M. D., of Walthourville, Liberty County, Georgia.

"Alcohol is an inflammable liquor lighter than water, of a warm acrid taste, colorless, transparent and of a pungent, aromatic odor."

It is the product of the fermentation of various grains, vegetables, and fruits. For commercial purposes it is chiefly obtained from grapes, molasses, corn, rye, and cider. The various kinds of wine and malt liquors have, each, a certain proportion of alcohol. The popular notion then, that the use of beer, and malt liquors generally is innocuous, upon the assumption that they contain none of this agent, is erroneous. According to the analysis of Brande, a large number of the most popular wines contain from 12 to 24 per cent. of alcohol; cider, porter, and ale, each from 4 to 8 per cent.; brandy 53, whiskey 54, and gin 57 per cent. Malt liquors differ from what are usually denominated as alcoholic and vinous preparations, in their possessing an intensely bitter, somewhat nutritious and narcotic principle, derived from the hop, which is employed for preserving them. The astringency of this agent, it is said, precipitates the vegetable mucilage, and prevents the fermentation which is apt to follow transportation to a warm climate. All animal and vegetable substances are composed of

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four elementary principles in nature—carbon, hydrogen, oxygen, and nitrogen. Four parts of carbon, six of hydrogen, and two of oxygen, form alcohol. As is well known, it is a highly inflammable substance; it resists the process of putrefaction in vegetable and animal substances, and is destitute of an essential element of all organized bodies, namely, nitrogen. Its effects upon the vital organism more especially demands our attention.

According to the quantity introduced into the stomach within a limited time, alcohol acts as a virulent poison, or a local and diffusible stimulant. When taken in large quantities, its sedative effects resemble those of prussic acid. It expends its force upon the nervous system, creating scarcely any antecedent stimulation, but almost immediately extinguishing the innate life-principle. Dr. Percy introduced a considerable quantity into the stomach of a dog, and death followed in two minutes. The post-mortem appearances of the blood, in such circumstances, are analogous to those following death by lightning; it loses its power of coagulating. Alcohol cannot be digested by the stomach. That peculiar digestive solvent in combination with the gastric acids is called pepsin. Now, the presence of alcohol is said to precipitate pepsin; to separate it from the gastric acids, and render it inert. The modus operandi of alcoholic stimulants is by direct imbibition into the blood. The absorbent veins drink them up, and quickly diffuse them, through the medium of the circulation, into every part of the system.

Alcohol is essentially a brain stimulant; it seems to have a special affinity for this important organ. In moderate quantities, it brightens the poetic talent, quickens the imagination and fancy, but does not appear to improve the reflective faculties, whereby a severe logical, or mathematical deduction is to be made after intense concentration of thought upon a given subject. The first impression of alcohol invokes a sensation of perfect self-complacency, as well as of general benevolence. It paralyses the tongue of slander, brightens the flashes of wit and humor, dispels the clouds of gloom and sorrow, demolishes by a single blow the barriers to reputation, fortune and glory, and encircles the future with a bright halo of hope, joy, and perpetual bliss. Another sparkling julep beclouds the mental vision; ideas confused and indistinct run into each other, objects are seen as if veiled with a mist; silence and moroseness, or brawlings and clamor, take the place of
jocund mirthfulness and warm affection, language becomes inco-
herent and silly, and the faculty of memory is blotted out.

The cerebrum is next invaded: the motions of the body are
unsteady, first one side and then the other, like a water-logged
junk, without a helm, it is tossed upon the surging billows, and
finally becomes engulfed in the abyss of lethean stupidity.
There he lies: the vessels and sinuses of his brain filled with a
poison which not only extinguishes every scintillation of intellect,
but almost annihilates the faculties of volition and sensation.

In another phase of his career, we see the inebriate the victim
of a delusion more torturing than that of beastly degradation.
With glaring eyes and ceaseless vigils, he beholds the Prince of
Darkness, with clanking chains and fiery imps tracking his every
step, and ready to take him a prisoner to those realms, where the
devotes of Bacchus render obeisance to their liege lord. The
brain has been known to be so completely saturated by constant
immersion in alcohol during life, that this fluid has been extracted
from its pulp, so that the organ has been brought into a condition
capable of resisting the process of putrefaction, and admirably pre-
pared for the scalpel of the demonstrator of anatomy. We will
further pursue this subject by inquiring into the validity of a few
of, what we deem, popular fallacies concerning the uses of alcohol.

Does alcohol contribute to the nutrition of the body, and does
it increase man’s physical strength and power of endurance? The
alimentary principles of food are divided into two classes, the
nitrogenous and the non-nitrogenous; or the flesh-producing and
the heat-producing. It is a proposition generally conceded by
chemical philosophers, that the albuminous tissues are maintained
chiefly by those alimentary substances which contain the elements
similar to those which enter into their own composition. What
are called the nitrogenized compounds are transformed into the
tissues of the body. They are called albumen, fibrin, gluten, and
casein. Albumen abounds in lean meats, various cereal grains,
and a variety of vegetables and grasses.

To the mind of the philosopher, then, truly “all flesh is grass.”
The muscles which move our limbs, the internal organs which sup-
port life, and the very seat of intelligence, owe their existence and
integrity to a regular supply of the alimentary principles above
mentioned. Lean meats, we all know, are easy of digestion, and
become rapidly assimilated to the wants of the animal economy.
Oily and fatty substances are difficult of digestion. They are devoid of albumen. Oil, starch, gum, sugar, and the vegetable acids and fruits, supply us with heat-producing elements. They are incapable of transformation into flesh. How beautifully and signall are the wants of man supplied by the hand of a munificent Providence!

The inhabitants of the polar regions trap the bear and beaver, and lay in store an abundance of oil and blubber, from the whale and other animals. Under the burning heat of the torrid zone, the air is fragrant with the sweet perfume of many flowers, and the senses are ravished with the rich luxuriance of luscious fruits, endlessly diversified in qualities, exactly suited to the physical wants of man.

The non-nitrogenous substances abound in hydrogen and carbon, highly combustible; hence they are appropriated in the animal economy to the sustenance of heat and inspiration. We call them, therefore, the fuel whereby the steam is generated which keeps the machinery in motion. Thus, we see that the hibernating animals, the polar bear, for instance, which remain dormant in winter, become excessively fat during the autumnal months. This deposit is slowly absorbed into the circulation, supplies the lungs with the materials for respiration, and thus it sustains life during the long state of his apparent inebriation. When the warm spring months impart their genial influence, he creeps out of his den a poor, lean, decrepit creature, the mere shadow of his former self. "Currie mentions the case of an individual who was unable to swallow, and whose body lost 100 lbs. in weight during a month."

We are well aware that alcohol is highly inflammable; it being entirely destitute of nitrogen is not convertible into flesh and blood, and, therefore, not a source of nutrition to the body. The Indian hunter, with his limited supply of parched corn and jerked venison, is almost a stranger to disease and fatigue. Through the trackless forest, he pursues the bounding deer, or with relentless ire the blood of his enemy, and yields neither repose to his limbs, nor slumber to his eyes, until avarice or vengeance is fully satisfied. It is said that among the trainers for prize-fighting, three essential points are observed: "1st, the requisite amount of exercise; 2nd, a diet of lean meats and stale bread; and, 3rd, an entire abstinence from alcoholic potations." In an extensive brick-mak-
ing establishment, which employment is regarded as being sufficiently laborious to test the capability of physical endurance, we have the following statistics:

Says a gentleman, residing in Uxbridge, England, "I obtained the amount of bricks made by the largest maker, and the result in favor of the tee-totaller was very satisfactory. Out of 23,000,000 of bricks made, the average per man, made by the beer-drinker in the season was 760,269, while the average for the tee-totaller was 795,400, which is 35,131 in favor of the latter. The highest number made by a beer-drinker was 880,000; the highest number made by a tee-totaller was 890,000; the lowest number made by a tee-totaller was 746,000; the lowest number made by a beer-drinker was 659,000, leaving 87,000 in favor of the former."*

Equally striking comparisons were made in an extensive machine shop. In the report of the proprietor, where between one and two thousand workmen were employed, he affirms, that in the summer-time, the men engaged as strikers to the forge who drink largely of water, are more active, can do more work, and are more healthy than those who make use of fermented liquors. Among agriculturists, where comparisons have been made by selecting equal numbers from the ranks of tee-totalism and moderate drinking, for the purpose of testing the capability of the two classes to endure protracted labor, in every instance the former have come off victorious.

As a familiar illustration of the influence of those substances like alcohol, which are deficient in strength producing elements, let us recur to our observation of facts in every day life. Who, when about to undertake a long journey, especially in warm weather, would confine his horse to a preparatory diet of potatoes, or continue this diet during the progress of his journey? His animal might become sleek and rotund while idle, laying up deposits of fat from his highly carbonaceous food, but after a few days of severe labor he would become dull and sluggish, and from loss of flesh and strength incapable of further exertion. Experience directs that his manger shall be well supplied with corn, hay, and oats. The article first mentioned abounds in fat-producing elements, while the latter afford those constituents which impart strength to the body, and by a slow process of assimilation to the different tissues they maintain an adequate proportion of heat, as

* Medico-Chirurgical Review.
well as a due supply of albumen to the muscles and bones, thereby affording the true source of nervous and muscular power.

Does alcohol protect against extremes of heat or cold?

The first impression of cold upon the body is exhilarating. It quickens muscular motion, increases the number of respirations, and imparts an electrifying influence to the whole nervous system. Extreme cold, protracted for a length of time, powerfully depresses the vital energies. We would suppose, then, that any agent loaded with carbon and hydrogen, which could be appropriated by the animal organism, would be peculiarly fitted for counteracting this depressing influence. It will be remembered that the modus operandi of alcohol, is by direct imbibition into the blood, and by its impression upon the nervous system. It is not susceptible of a gradual process of digestion, whereby its heat-producing qualities are slowly supplied to the lungs for the elaboration of heat, but its highly inflammatory nature produces intense plethora of the blood-vessels, and great general excitement. In proportion to the degree of excitement will then be a corresponding stage of depression; increased sensibility to cold must follow the subsidence of the impression made by a single potation. The toper, therefore, by frequent alternations of those opposite states of the system, loses his physical appliances to resist the effects of cold, and he either relapses into the fatal stupor of intoxication, or into that slumber which is the inevitable precursor of the freezing of the very fountain of life.

Naval commanders, who have wintered crews in high polar latitudes, give abundant testimony in confirmation of the views just expressed. "In 1619, the crew of a Danish ship of 60 men, well supplied with provisions and ardent spirits, attempted to pass the winter at Honduras Bay, but 58 of them died before spring; while in the case of an English crew of 22 men, in the same circumstances, but destitute of distilled spirits, only two died. In the winter of 1796, a vessel was wrecked on an island off the coast of Massachusetts; there were seven persons on board; it was night; five of them resolved to quit the wreck and seek shelter on shore. To prepare for the attempt, four of them drank freely of spirituous liquors, the fifth would drink none. They all leaped into the water; one was drowned before he reached the shore, the other four came to land, and in a deep snow and piercing cold directed their steps to a distant light. All who drank spirits failed, and
stopped, and froze one after another; the man who drank none reached the house in safety." (Youmans, on Alcohol.)

Hot coffee and tea are much to be preferred as heat-producing agents, being equally as prompt in imparting warmth to the body, and their effects are much more protracted. The ingestion of solid food, more especially lean and fat meats, keeps up a regular supply of heat, for it is, during the process of digestion and assimilation, imparting warmth to the body, and strength to the muscles and bones. In excessively cold countries, Lapland for instance, you will see the inhabitants luxuriating upon a dinner of train oil and tallow candles. Disgusting as this repast may appear to us, he, nevertheless, enjoys it; for the excessive demand made upon his blood for those materials which aid in resisting the external temperature, sharpens his appetite and affords him transporting pleasure. But it is asserted that in hot climates where the system becomes enervated by long-continued and elevated temperature, some stimulus is necessary to give appetite for food, and to brace up the relaxed fibre. It is a well established fact, that the inhabitants of hot climates require less food, particularly of a stimulating nature, than those inhabiting cold regions; and for the very obvious reason that there is less fuel required. As has been already remarked, a good portion of our aliment, during the winter, is exhausted in maintaining the natural temperature of the body; during the summer, the surrounding air being heated, the demand made by the respiratory system is withdrawn, and food of that kind and quality is called for which supplies the natural waste of the tissues. The hard laboring man will perceive very little difference in his appetite during this season, for the process of combustion is continuing at a rapid rate, and he would soon be consumed, did not the amount of surplus heat find exit in the form of watery vapor from the lungs, and through the skin in copious torrents of perspiration. It is the man of idle and sedentary habits who is troubled with a disgust for food. "A drop of comfort" immediately before dinner is solicited to spur up the languid stomach, and stimulate the drooping energies. But at such times, the individual pursuing an occupation wherein there is comparatively a passive condition of the muscles, nature is competent to dispose of but little food, and her demands are made accordingly. Instead of swallowing fire at such times, you must pour on water. At such an hour as you are in the habit of visiting the ale or por-
ter fount, wake up your sleeping muscles in the varied exercises of the gymnasmium, and then indulge in the glorious luxury of a cold bath, and in lieu of temporary hilarity, and a morbid relish for the tempting viands of the table, whereby your stomach is forced to receive double as much food as it can digest with ease and comfort, inducing a sensation of heaviness and stupidity after dinner, there will be an electrical influence imparted to the muscular fibre, a moderate increase of your appetite, an elasticity of step and feeling, that impart life and vigor to the digestive apparatus, and ease and comfort to the soul. Dr. Leibig, than whom I could not cite higher authority, thus discourses: "The Englishman, in Jamaica, sees with regret the disappearance of his appetite, previously a source of frequently recurring enjoyment; and he succeeds by the use of cayenne pepper and the most powerful stimulants, in enabling himself to take as much food as he was accustomed to at home. But the whole of the carbon thus introduced into the system is not consumed; the temperature of the air is too high, and the oppressive heat does not allow him to increase the number of respirations by active exercise, and thus to proportion the waste to the amount of food taken; disease of some kind must necessarily ensue." Thus, we see, that an individual in the enjoyment of health requires no aid from this despotick sovereign for the performance of the most protracted and laborious demands upon his physical and mental energies. Temperance in diet, properly regulated exercise, and "Nature's sweet restorer, balmy sleep," and ablutions and draughts from the pure fountain, unadulterated as it issues from the bosom of earth, afford the motive and sustaining power by which the most complex and perfect of all machinery is maintained in a state of perfect integrity.

Does alcohol protect from contagion?

The most perfect state of physical health, that in which the organs perform their functions naturally, when each discharges its duty in faithful obedience to those physiological laws which a kind Providence has placed over the body physical, ensures the most efficient and successful resistance against the encroachments of disease. The successful military chieftain enforces that rigid, yet wholesome discipline, whereby the most implicit obedience is ensured. In anticipation of a collision with an approaching enemy, he marshals his forces, so that each division will act in concert, and with one grand object in view, to render reciprocal assistance
in repelling an attack. From a commanding position, with one sweep of his telescope, his practical and mathematical eye discovers the most vulnerable points of his army, and every faculty of his mind is brought into requisition in adjusting the whole into perfect harmony and symmetry. So with the animal economy. When this delicate organism is subject to such extremes of excitement and depression, at one time an important organ almost paralyzed by over stimulation and exertion, and at another from a deficiency of nervous energy, "the pestilence that walketh in darkness," steals upon the sentinels at the outposts, and victory perches upon his standard. The testimony of hospital reports, and the records of benevolent associations, physicians and surgeons, give ample confirmation to this lamentable fact.

W..rites Dr. Carpenter: "The nurses in the cholera hospital at Manchester, were at first worked six hours, and allowed to go home the other six, and the mortality was so great among them that there were fears of the failure of a supply. It was found, however, that they were much given to alcoholic potations (with the idea probably of better resisting the malady,) during their leisure hours, and they were, therefore, confined to the hospital and debarred from obtaining more than a small allowance of alcoholic drink; after which, not a single case occurred among them."

In the history of the ravages of pestilence, whether yellow fever, cholera, or dysentery, all reports agree that the bacchanalian, the debauchee, or even he who is habitually accustomed to the daily use of alcoholic potations in considerable quantities, is among the first to fall beneath the scythe of the Destroying Angel. The mechanism of the human frame is so complex, yet so complete in all its arrangements, exhibiting such beautiful harmony and concert in the movements of its different parts, that at the same time that we adore the wisdom and beneficence of the Divine Architect, we wonder that it can be maintained in motion, for even the mean duration of human life, under an observance of the most rigid rules of health. In the processes of digestion, assimilation, secretion, and the reproduction of the tissues, any agent, the tendency of which is to interrupt the nice counterpoise between the assimilating and depurating organs, must necessarily derange the operations of the whole machinery. An excess of carbon in the blood, independent of the local effects of alcohol upon the stomach, and the general plethoric condition of the circulation, demands extra-
ordinary efforts on the part of the lungs, the liver, and the kidneys for the elimination of the poison, and the maintenance of the healthful functions of these organs. The insidious nature of this poison, stealthy in its march yet unerring in its aim, renders it peculiarly formidable. The case of Alexis St. Martin, upon whom Dr. Beaumont made some interesting physiological experiments upon the digestion of food, reads an instructive lesson:

Says, Dr. Beaumont—“St. Martin has been drinking spirits, for eight or ten days, pretty freely; complains of no pain nor shows symptoms of general indisposition; says he feels well and has a good appetite. August 1st.—Inner membrane of the stomach unusually morbid; appearance of inflammation more extensive, and spots more livid than usual, from the surface of which exuded small drops of thick, clotted blood. * * * The gastric fluids extracted this morning were mixed with a large proportion of thick, ropy mucus, slightly tinged with blood. The free use of ardent spirits, wine, beer, or any intoxicating liquor, when continued for some days, has invariably produced these morbid changes.”

Here, then, we have ocular demonstration of the morbid tendency of this agent. The subject complained of no pain, nor symptoms of general indisposition, excepting an uneasy sensation and slight tenderness over the epigastrium, and slight vertigo and dimness of vision on stooping down and rising up, and yet the mucous membrane was the seat of intense congestion, to such a degree, as to cause the exudation of blood upon its surface. When the inordinate use of alcoholic drinks has been habitual for a length of time, the mucous membrane of the stomach becomes thickened, the organ in a measure loses its power of contracting upon food, the pit of the stomach becomes distended, and malignant disease not unfrequently ensues. “It is incontrovertibly established by a collection of many facts, that this disease (cancer of the stomach,) is frequently brought on in those who become addicted to the inordinate use of spirituous liquor.” (Cyclop. Pract. Med., vol. iv. p. 260.) The close proximity of the stomach to the liver, and the direct sympathy existing between them, persistent derangement in the function of the former almost necessarily involves that of the latter: hence, seated pain over the region of the liver, swelling, and entire perversion of the hepatic secretion, are frequently concomitant of gastric disorders. Constant irritation sometimes induces excessive enlargement of the liver, but most
generally it becomes hard, small, with few traces of blood vessels, and an entire arrest of the healthy secretion of bile is the necessary result. The experience of almost every physician will attest the depressing effects of alcohol in acute disease. External appearances may indicate the enjoyment of high health; the blood circulates with freedom through the capillaries, lighting up the cheek with the color of the rose, but it is carrying along with it a poison which is slowly consuming the vital energies. When disease attacks the internal organs, where are the innate recuperative powers of the system? Paralysed, as if by the weight of some unmovable incubus. The blood, deficient in oxygen, is deprived of its stimulating and health-giving influence. Depleting remedies, the most potent in states of high inflammation, are powerless, nay, directly injurious. The system succumbs from the abstraction of even a small quantity of blood, or under the operation of brisk cathartics, and disease, in a majority of cases, makes a triumphal march—with his victim an easy captive.

The inebriate transmits a desire for stimulants to his offspring.

Examples of hereditary transmission of disease occur within the observation of almost every one. Consumption, scrofula, insanity, deafness, and various other disorders, descend from one generation to another. Peculiarities of individual character in the parent are exemplified in the child. When the brain and nervous system have been the subject of such torturing persecution; at one time lashed into fury, and at another, sunk to the lowest depths of depression, is it wonderful that the offspring of such parents should inherit a weak and perverted nervous system—overthrown by the least unusual exciting cause, subject to spasms, convulsions, and falling readily into attacks of epilepsy or idiocy? Not only is this peculiarly delicate and irritable temperament transmissible from parent to child, but descends even to the third generation; and in many instances, where the influence of parental example has been withdrawn by reformation or death, even the subduing power of maternal affection, and the unqualified condemnation of society have proven entirely inadequate to extinguish the latent spark. In a report on Idiocy, by Dr. Howe,* to the Legislature of Massachusetts, we have the following statistics: 

* Youmans, on Alcohol.
it is affirmed, give a weak and sickly constitution to their children, who are consequently deficient in bodily and vital energy, and predisposed by their very organization to have cravings for alcoholic stimulants." I believe that the records of hospitals for the insane, will exhibit comparisons equally as striking as the above. Within the field of his own observation, almost every physician can recur to the fact of whole lines of ancestry, extending through several successive generations, having been consigned to premature graves, if not by debauching and profligacy, by the exhausting effects of alcohol upon the physical system, causing them readily to fall a prey to acute disease.

But the most revolting condition into which the human body is brought, is, that which favors its spontaneous combustion. Many well attested instances are recorded, where the bodies of individuals, entirely isolated, and removed from any ordinary inflammable material, have spontaneously taken fire and been, at least, partially, if not wholly consumed. I am not aware that that peculiar chemical condition of the solids and fluids which predisposes to such a catastrophe, has ever been clearly and satisfactorily defined, but I believe that the victims have been in the daily habit, during life, of indulging liberally in the use of alcoholic stimulants.

Thus have we taken a cursory glance at a few of the effects of alcoholic stimulants upon man's physical constitution in a state of health. Their value, as remedial agents in a diseased condition of the body, cannot be questioned, but it would take us beyond the limits of our present purpose to protract this article to greater length.

ARTICLE XXIV.

Flesh Worm, (Filaria Medinensis.) By N. S. Walker, M. D., of Arlona, Putnam county, Ga.

Two years since, I saw and treated a singular case of what I at last pronounced a living animal, and perhaps of the above name. The history of the case is this:—

The parents seemed healthy, though in very indigent circumstances. The only child was apparently healthy, until about three months after its birth, when a small red speck was noticed
on the gluteal muscles, at or near the rim of the pelvis, which gradually enlarged, to the size of a small pea, of oval shape; and in about two weeks after its first discovery, it gradually began to elongate and to descend the thigh, making perhaps the distance of two lines a day at first, but gradually increasing in speed and in length. The cord-like object was well defined under the skin, and could be seen as well as felt.

The worm, as I shall call it, went on in a zig-zag course downwards, nearly passing around the limb, but mostly confined to the outer, and under surface. The anterior part, for perhaps an inch, was of a bright scarlet color, and grew paler upwards, until the skin, immediately over the track, assumed a dark yellow cast. The child showed symptoms of uneasiness, especially at night, when it was feverish and restless. When the head had reached the lower half of the leg, I cut across it in several places, and one cut was made half an inch from the head, and from this cut there oozed out a few drops of a light, thin, yellow fluid.

This operation, contrary to the advice of most writers, put a stop to the train, all, except the half inch, or more, of the head, which went on, though slower than formerly, and when it had reached the ankle joint, I again cut it up in small bits, but could not extract any part of it—though I did not persist in trying. This last operation put a final stop to it, and the skin assumed its natural color. At the time the worm was cut first, it progressed at least a half inch in twenty-four hours; and from the time it was first seen, until it reached the foot, there intervened at least four months.

This certainly must have been a Guinea worm, (Filaria Medinensis of the books,) and is altogether interesting, from its novelty in this country. The parents were filthy in their habits, and the floor of the house was of dirt. The length of the worm could not well be ascertained, as the latter end was not well defined, though I supposed it to be, at one time, at least ten inches long.

[Professor Richard Owen gives the following description of the Guinea-worm, which we append as corroborative of the above report:—"The Medina or Guinea-worm (Filaria medinensis, Gmel.) is developed in the subcutaneous cellular texture, generally in the lower extremities, especially the feet, sometimes in the scrotum, and also, but very rarely, beneath the tunica conjunctiva of the
I. It appears to be endemic in the tropical regions of Asia and Africa.

"The length of this worm varies from six inches, to two, eight or twelve feet; its thickness is from half to two-thirds of a line; it is of a whitish color in general, but sometimes of a dark brown hue. The body is round and sub-equal, a little attenuated towards the anterior extremity. In a recent specimen of small size, we have observed that the orbicular mouth was surrounded by three slightly raised swellings, which were continued a little way along the body and gradually lost; the body is traversed by two longitudinal lines corresponding to the intervals of the two well-marked fasciculi of longitudinal muscular fibres. The caudal extremity of the male is obtuse, and admits a single spiculum; in the female it is acute, and suddenly inflected."—Hunterian Lectures, Lect. vi., p. 96.—[Edts.

ARTICLE XXV.

Treatment of a Case of Puerperal Convulsions by the internal administration of Chloroform. Reported by Josiah Brown, M. D., of Gaylesville, Alabama.

Wednesday, 24th December, 1853. Called to see Mrs. Grubbs at 7 o'clock P. M, age 19: good constitution, plethoric habit, and seven months advanced in first pregnancy. She had been suffering with headache a fortnight or more, accompanied with an oedematous condition of the lower extremities.

I found her in one of those horrible convulsions of the epileptic form, such as none but the most experienced physician can witness with any degree of composure. This being the first case of the kind with which I had ever met, and presenting, as I thought, many unfavorable and fatal symptoms, I resolved at once to put her upon a somewhat heroic treatment.

I first abstracted 40 oz. of blood, which did not appear to have the least effect in arresting the paroxysms; I then exhibited chloroform, by inhalation, as far as seemed judicious: all to no purpose—the spasms recurring with equal severity every twelve or fifteen minutes. It then occurred to me that I had recently seen a statement of its being given internally for Cramp Colic, with the most happy effects. The question suggested itself, why it might not be a safe and effectual remedy in this case.
After waiting from a half to three quarters of an hour, to observe the effect of what had already been done, I administered an ordinary sized teaspoonful of chloroform by the mouth, every two hours, until four doses were given. This had the desired effect—not a symptom of the convulsions recurring after administering the first dose.

Three hours after the last dose was given, Mrs. G. was delivered of a dead foetus. I then left for home, leaving a vial of chloroform, with directions to give a half teaspoonful every four hours, until four more doses were taken. Also, for her bowels to be moved by castor oil at night; after the action of which, 15 grs. Dover's powders to be given at one dose.

Friday morning. Again visited Mrs. G. Found her doing well; free from fever, bowels having been moved, and she was feeling very much refreshed by a good night's sleep.

This constitutes the whole of the treatment for this case, with the exception of five grains Iron by Hydrogen, which was given morning and evening, for ten days after; since which time Mrs. Grubbs has enjoyed excellent health.

[However happily chloroform, in the above doses, may have acted in the isolated case of Dr. B., we feel constrained to state, in connection with it, that our own experience has been rather against large doses, internally administered. On one occasion, we, by accident, gave a patient (a strong negro man) about 1½ teaspoonfuls of chloroform, for chloric aether; the effect was truly alarming—it required hours of the most energetic exertions, with emetics, cold douche and revulsives, to keep him alive; at the end of which time, he slowly recovered. Anthony, our own office servant, while suffering from cramp colic, during our absence, took one tablespoonful of chloric aether, which happening to be the concentrated preparation used in surgical cases, the effect was more alarming than in the above case, even to the apparent suspension of life. For nearly ten minutes of the time, he was without perceptible pulse and respiration was extremely embarrassed. Since these cases, we have a species of horror for large doses of chloroform, internally administered. It must be recollected, however, that the doses recommended by Doctor Brown were but one teaspoonful, while in our accidental cases, the quantity given was nearly double that amount.]—Edts.
On the Treatment of Scarlatina by the Diluted Acetic Acid. By B. F. SCHNECK, M. D., of Lebanon, Pa.

During the past twelve or fourteen months a severe epidemic of scarlatina has prevailed in my neighborhood. Of 190 cases of the disease treated by me in accordance with the method recommended by our best authorities, I lost 1 in 8\(\frac{1}{2}\) to 9.

Dissatisfied with this result, I was induced to try the diluted acetic acid as recommended by Dr. I. B. Brown, whose work * I had the good fortune to meet with at the commencement of the present year. Of 60 cases treated subsequently by this plan, I did not lose one. The disease at this time had not undergone any abatement from its former violence; for among the sixty recoveries there were cases of such malignancy, as would inevitably have perished under the best directed previous efforts. It is true that two of the sixty afterwards died of thoracic and cerebral dropsy; and one, after a nearly two weeks' convalescence, from purpura hæmorrhagica, with epistaxis, hæmaturia, &c.; but these cases cannot be regarded as affecting the integrity of the plan in question. I am thus enabled to bear a flattering testimony to the success of Dr. B.'s method.

Many medical men, after unsatisfactory trials of all the ordinary modes of treatment, now declare that the less there is done for scarlatina the better. All such will be apt to think lightly of Dr. Brown's method; if, indeed, they do not condemn what they may choose to call his nimia cura medici. Let such rest assured, however, that this is a disease which, like weeds, flourishes most when least attended to; and further, that the character of medical adviser must be merged, for the time, in that of nurse also, to a certain extent, if his ministrations are to be successful. He should see his patients several times in a day—the oftener the better; and following the example of our author, he should even be found holding nightly vigils by the bedside, if the urgency of the case required it. The daily dressings of the fauces with caustic should, if possible, be made by himself; he should direct the frequency of the repetition of stimulants; and even the minutest details should ever be under his immediate cognizance. Thus fully occupied, although he may be able to take charge of fewer patients, he will save more lives; and only thus will he be able to realize the truth of the otherwise almost incredible statement of a friend of the author's engaged in extensive practice, who writes, "that the number of fatal cases occurring to him under this treatment did not exceed four." This gratifying result, it is the writer's firm conviction, will be the reward of all who will adopt and faithfully carry out the plan.

The following is a synopsis of Dr. Brown's views:—

1. Scarlatina is always and essentially a disease of debility, or tending to debility, and not of an inflammatory nature. Its poison acts primarily and most fatally upon the blood, producing a dissolved, semi-vitalized and putrescible condition of that fluid; so that it possesses more serum and less fibrin than in its normal state. "Consequently the serum percolates, or is effused into the cellular tissue and cavities, through the coats of the vessels. Salines favour this dissolved state of the blood; but acetic acid prevents the separation of the serum from the fibrin.

2. Acetic acid is an excellent antiseptic; "it gives tone to the blood in scarlatina, and prevents the separation of the serum from the fibrin." It also "acts as an astringent upon the lymphatic system and serous membranes, and so effectually prevents dropsy."

3. It is a grateful refrigerant.

4. No medicine has a more decided influence in promoting digestion than this acid. We are further directed, while administering it, to "allow patients almost anything they fancy; it will seldom hurt them in severe and even dangerous disease."

These four points lie at the foundation of Dr. Brown's very simple and very successful treatment. The specialities of his method will not be given, as applicable to the several forms of the disease.

Whatever may be the type, he prepares the system for the acid, by giving

1. An aperient of 3 to 5 grs. of calomel, to be followed in two hours by castor oil. All saline aperients are condemned; "salines favour a dissolved state of the blood." If from great gastric irritability, the oil is rejected, he recommends an aperient mixture (rhubarb and magnesia,) which contains no saline substance.

2. Apply a piece of flannel round the throat from ear to ear, saturated with soap lin. f 3j; camphor lin., laudanum, aa 3ij.—M.

3. After the operation of the oil, give—for a patient nine years old—distilled vinegar, diluted,* f 3j; syrup f 3iv; distilled water f 3iv.—M. Two tablespoonfuls every four hours. This mixture is to be continued throughout the entire duration of the case, whatever the form of the disease; and for one or two weeks afterwards, or until desquamation is well over. "It acts as an astringent upon the lymphatic system and serous membranes, and so effectually prevents dropsy."

4. Whenever, in scarlatina simplex, there is slight delirium in the beginning, with a thick, viscid phlegm on the tonsils, apply daily—nitr. silver grs. x; distilled water f 3j.—M. You thus prevent s. anginosa. If the throat require it, a linseed poultice may be placed over the flannel, and kept there constantly.

* R.—Distilled vinegar, offic., one part; water seven parts.—M.

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5. On the third or fourth day, in simple cases, allow mutton-broth.

6. As soon as desquamation comes on, order a warm bath or two, and keep the patient strictly in bed during the whole process.

S. Anginosa.—Here the treatment is the same, except that the caustic must be used more frequently, and the proportion of acid in the solution must be increased. A good rule is to increase the strength according to the violence of the attack, in bad cases giving it as strong as the patient can take it. Poultices to throat. Should symptoms of adynamia come on, give arrow-root, with a spoonful of brandy in it; add comp. sp. ether to acid solution; wash face, hands, legs, and chest with tepid vinegar (\(\frac{1}{4}\)) and water (\(\frac{3}{4}\)). If restless at night, give tinct. hyoscyam., or (\(\frac{1}{4}\)) to (\(\frac{1}{4}\)) gr. morphia, according to age. The decoction of bark may also be added to the acid mixture. Whenever, in s. anginosa, symptoms of adynamia come on, dress the throat frequently with caustic, and increase the quantity of acid from day to day; you thus prevent s. maligna.

For adults, in cases partaking of the nature of s. maligna, the following formula is given: B.—Distilled vinegar f\(\frac{3}{4}\)iv; syr. red poppies f\(\frac{3}{4}\)iv; distilled water f\(\frac{3}{4}\)iv.—M. One-fourth part to be taken every four hours.

In s. maligna the same course of treatment is to be pursued; calomel, oil, caustic, acid mixture (strong,) liniment or sinapism to throat, followed by poultices; brandy or port wine every four to six hours, with arrowroot, beef tea, or mutton-broth; morphia at bedtime, or whenever restless, and sponging with tepid vinegar and water. All the bed furniture, carpets, &c., to be removed from the room, and chloride of lime to be sprinkled about the floor. During desquamation, the patient is not to sit up at all. Give at this time one or more warm baths. Use wine and brandy in s. maligna, even in the febrile stage; when combined with the acid, which so powerfully assists digestion, no harm will ever accrue from their use.

This is a brief statement of Dr. Brown's views and practice in this terrible malady. To the work itself we must refer for a number of valuable cases, illustrating most happily the treatment which he advocates, and interspersed with many highly practical remarks. I cannot help transcribing at length, as a fitting close to this portion of the subject, the following observations, which I have copied from his work:

"Very much depends on careful watching in this disease; there is always in one or the other of the stages, a critical moment. For instance, in the eruptive stage, even in s. simplex, delirium will come on, and the throat will become more clogged with viscid secretion in a few hours; and if attention be not promptly given, and this phlegm, which impedes free respiration, be not removed, the delirium and laborious breathing will in-
crease, and the disease will soon run into the second or anginose form. In this case, the throat must be promptly cleansed, and some gentle nourishment be given. Again, in s. anginosa, it will not seldom happen that the tonsils and fauces will suddenly become worse, or great sickness or sudden prostration will come on; now, unless the throat be instantly attended to, delirium, laborious breathing, difficult deglutition, and restlessness will make serious ravages upon the patient, and all remedies will quickly become unavailing; or where sudden prostration should arise, then we must promptly and unsparingly administer stimulants and cordials till the pulse exhibits more steadiness and power."

The practical importance of these directions cannot be over estimated. As assisting the cleansing of the fauces from viscid secretions, I have, for several years past, been in the habit of injecting the diluted chlorinated soda into the nares, with the happiest effects. Extensive ulceration, not only of the posterior nares, but of the entire nasal tract, with an abundant secretion of a peculiar tenacious mucus, are an attendant on every bad case; and these passages cannot be long obstructed without great distress and imminent danger. The daily or bi-daily injection of Labarraque's solution, therefore, while it effectually clears away the obstruction (as any other liquid would as well,) exerts besides an alterative and healing influence upon the ulcerated surface itself; and it destroys, while it removes, the morbid products which, if swallowed, as they are otherwise sure to be, disturb so seriously the intestinal canal; and last, but not least, it corrects the fetor which is so disagreeable a concomitant of such cases. So signal is the relief derived from this procedure, that, unpleasant though the sensation must be, I have seen the little patients, instead of shrinking from the operation, instinctively court the repetition of it, and if old enough, ask for it. It is a measure which, in the class of cases referred to, cannot be dispensed with, without loss. But as it may happen that a considerable quantity of the injection may be swallowed, and the blood be thereby impaired, it will be proper always to precede or follow the injection with a strong dose of acetic acid, so as to neutralize the saline ingredient.

The preparation of the acetic acid solution may be varied somewhat from the formulas given above, and so simplified, without in the least affecting the result. Instead of first diluting the concentrated acid to the strength of vinegar, and then using the dilution for the preparation of the solution, I have been accustomed merely to add from $f\frac{3}{4}$ to $f\frac{3}{4}$ of the officinal acid to $f\frac{3}{4}$ of water and ordering a tablespoonful every few hours, sweetening at the time of administering it. We must, however, never forget to increase the strength in proportion to the threatening nature of the symptoms.

In the use of stimulants, also, a little license has been taken with our author's directions. Having ventured upon the guarded employment of brandy, beef-essence, &c., as a precautionary step,
earlier in the attack than he allows, without detriment, I now administer brandy in graduated doses, two or three times a day from the beginning in the malignant form, or on the second or third day in anginose cases; and I have seen no reason to regret this course. If the tongue becomes red like a strawberry, with the papilae as large as a pin’s head, or on the contrary, brown, dry, fissured, with sordes on the teeth; and if there be, besides, a recession of the eruption, a pulse fluttering and not to be counted, or even delirium, “then we must unspARINGLY administer stimulants and cordials, until the pulse exhibits more steadiness and power.” Carb. ammonia, quinia, and even capsicum, have here all failed me; this last having proved alike ineffectual as an arterial stimulant, and as a local application to the fauces.

If scarlatina were an inflammatory disease, as the advocates of bleeding and antiphlogistics would have us to believe, such a stimulant course could not fail to result disastrously in nearly every instance; but the reverse is actually the fact. The violent excitement in severe attacks, as indicated by burning skin, rapid pulse, delirium, etc., is not an evidence of phlogosis, but of irritation. And when death takes place in such cases, it is not so much from inflammatory disorganization of any vital part, as from sheer exhaustion; the inevitable consequence of the excitement into which the system had worked itself, in its vain struggles against the fatal poison which was oppressing it.

Dr. Brown’s silence in regard to the use of emetics is a significant fact; although more celebrated authorities than he, recommend them highly. Their adoption at all, as part of the treatment, was probably suggested by the nausea and vomiting which almost always usher in the attack; under the supposition of the presence of acrid ingesta, which they were designed to remove. It may be, that when the mildest article is selected, solely with this view, they may do no harm; but when administered indiscriminately, fatal results must occasionally follow the practice.

Dentition, improper food, the hot months, and a hereditary predisposition, may all, in scarlatina, favor the occurrence of serious gastro-intestinal disease, from the least exciting cause; and an emetic, especially if containing tart, antimony as advised by some, may be this cause. In the month of July, 1856, I was called to see a child aged twenty months, ill with s. anginosa, running into maligna, with scarcely any eruption. Notwithstanding the child had vomited, an emetic of ipecacuanha with calomel was given, after a warm bath; to be followed by sp. nitric ether and bicarb. soda in solution, with capsicum infusion. The vomiting became unmanageable, attended with a copious diarrhoea; gastritis supervened, with peritonitis and enormous abdominal distension; and on the fourth day the child died in convulsions. The emetic most probably had killed it.

What, let us ask, does the gastric irritability of this disease
mean? Is it not the first appreciable alarm given by nature of the introduction of the poison, and an ineffectual attempt on the system, to get rid of it at the outset? But as the morbid matter is introduced, and the blood saturated with it, many days it may be before it actually develops itself, how can we expect emesis, whether spontaneous or artificial, to dislodge it? If, instead of vomiting, scarlatina began with diarrhoea, would we be justified in giving an active purgative, with the same object? Assuming Dr. Brown's view to be correct, would it not be malpractice to bring to bear the depressing effects of a nauseating emetic upon a disease whose tendency from the beginning is towards debility? The unfortunate result above related has convinced me that the use of emetics, as a matter of routine, is fraught with great danger; and that their employment is indicated in very few, and very special cases, if at all.

The following cases, representing the worst forms of s. anginosa and maligna, are selected out of a number of similar ones, from my case-book, as illustrating the gratifying success of the acetic acid treatment, even when under the most unfavorable circumstances.

Case I.—Dec. 27, 1856. Saw a girl of Jos. Heilman, aged 13, in an attack of s. ang. threatening maligna. On the evening of the 28th, found more fever, very frequent, angry pulse, constant sighing and heaving of the breath, with increased pulse of heart. Suspicion of pericarditis, and tempted to bleed. Concluded to postpone till next morning; ordering sinapisms to extremities, and dose calomel. Was prevented from seeing her until next day towards evening.

29th. Pericarditis now clear. Bled viii. oz.; epispastic to left chest; cal. and op. aa ¼ gr. every 2 hours; sinapisms to extremities. Eruption well out. Teaspoonful brandy at one, to be continued 3 or 4 times a day, with beef essence.

30th. Effusion around heart; impulse scarcely perceptible to hand, or audible; at times delirious; eruption well out; slight epistaxis. Inunction with mercurial oint., and same to blister. Continue remedies.

31st. Morning. Pulse more full, and a shade lower; impulse of heart more perceptible, and less muffled; had 3 or 4 evacuations. Continue treatment, with alternate doses of pulv. scillæ and digital., aa ½ gr., cal. ¼ grain.

Evening. Cardiac trouble decidedly better; but alarming prostration, from epistaxis to the extent of a pint. Partial coma; tongue dry, and papillæ very much elevated; four alvine discharges. Cold cloths to head and neck; Dover's p. 3 grs., digital. ¼ gr., acet. lead ½ gr. every 2 hours (having omitted former powders); 10 drops elix. vitriol every 2 hours. Sinapismus to extremities; iced lemonade for a drink; may die to-night.

Jan. 1, 1857. Morning. Bled a pint or more at two several times, to-night; extremely exhausted; but one dose of the medicines ordered last evening was given; family expecting her death hourly. This being contrary to my express orders, I at once directed a resumption of the treatment, including brandy and essence of beef.
Evening. Has taken remedies all day; no bleeding. Pulse a little fuller, and slightly slower. Tongue dry, and covered with crusts of blood. Eruption apparently about to decline on upper part of body, but well out on lower extremities. Continue treatment, at three hours' interval.

2nd. Noon. Pulse a little slower; circumscribed flush on each cheek; face sunken; tongue very dry; skin dusky, and whole case *typhoid*. Turpentine emulsion and elix. vitriol, with beef essence, and brandy and milk.

3rd. Tongue a little more moist. Continue remedies.

4th. Improving; pulse a little slower. Will recover.

5th to 6th. Has great appetite. Slowly convalescent.

Remarks—Bleeding, in scarlet fever, is not necessarily an injurious measure, especially if its otherwise depressing effect be guarded against, immediately afterwards, by suitable doses of stimulants and nourishment. In this instance, the venesection most assuredly saved life, by moderating and favoring the resolution of the cardiac inflammation; which, although it had gone on to the effusion of serum, was nevertheless relieved by it, and by the subsequent use of squill, digitalis, and calomel. The recession of the eruption, which might otherwise have followed the bleeding, was also prevented by the prompt administration of small doses of brandy. In a similar case of pericarditis in the course of scarlatina, I should feel emboldened to bleed largely, giving stimulants and beef-tea generously, immediately afterwards, as the only mode promising success.

Case II.—*S. Anginosa running into Maligna.*—Dec. 30, 1850. Girl of Geo. Strohm, aged 4 years. Vomiting; very rapid, irritable pulse; eruption of a vivid red colour; tonsils greatly enlarged, and covered with lymphy exudations. Solid caustic to throat; cal. oil, and strong acid solution.

Jan. 1, 1857—Morning. Symptoms of great malignancy; fauces of a dark purple hue; face mottled with white patches, where the eruption showed a disposition to recede; excessive restlessness all night, getting out of bed in the delirium; surface of an intensely deep red colour; pulse rather feeble, and slow. Solid caustic to throat; sinapism externally, to be followed by poultices. Teaspoonful of brandy every five or six hours, if not gone to sleep. Beef-essence; acid solution stronger.

Evening. Has slept some hours; face more uniformly red; pulse more frequent; surface hot. Sol. 10 grs. nitr. silver to 3j water, to fauces twice a day; chlorinated soda injections into nares. Continue remedies.

2nd. Same as last evening. Comp. camph. lin. to throat, which is much swollen; caustic, injections, brandy, and beef-tea.

3rd. Desquamation already beginning on different parts of the body, being only the fifth day—a bad sign. Continue remedies.

4th. Throat very much swollen externally; tonsils deeply ulcerated; case very malignant; sinking, and very restless; surface pale and cool.

10 P. M. Was sent for; supposed to be dying. Prognosis very bad. Solid caustic to throat; injection into nares; brandy every two or three hours, and continue remedies.

5th. Pulse a shade lower. Family did not attend to throat this morn-
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ing. Applied caustic at once, and injected chlor. soda into nares, bringing away large masses of viscid secretions, with great relief. Quite rational. 6th to 10th. Pulse slower. Gradually convalescent.

**Remarks.**—This case exhibited what I have repeatedly seen in this epidemic—a succession of pure white patches in the midst of the eruption, on the face most generally; appearing in the course of a few minutes, and persisting sometimes for half a day, or longer. Having met with this symptom only in cases of a malignant character, with a cool skin, and other signs of adynamia, I have come to regard it as an indication for the prompt use of stimulants.

The early occurrence of desquamation in this case—on the fifteenth day of the eruption—is also worthy of note, as indicating great pravity of system. In September, 1856, I met with a case in which desquamation began, all over the body, in extensive patches, on the fourth day of the eruption. The skin was as though it had been seethed or scalded; the cuticle separating first at the points of pressure from the motions of the patient, incident to her changes of posture in the delirium—as the elbows, hips, etc.—but finally coming away wherever the clothing lay in contact with it. These denuded surfaces were literally raw; when recent, serum standing upon them in minute drops. The patient, a girl of 15 years, died rapidly of pericarditis.

**Case III.**—*Purpura following S. Anginosa and Maligna.*—Feb. 23rd, 1857. In this instance, as in a considerable number of others in this epidemic, I observed that the eruption on the arms was most fully out along the course of the nervous trunks, there being a broad belt, of an intensely red colour, in the line of the blood-vessels and lymphatics, from the hand to the axilla. Having never seen this symptom noticed, and having observed it only in the worst forms of the disease, I have been led to regard it as indicating either phlebitis, or inflammation of the absorbents, and, as such, a serious complication of the case. The details of this case are very similar to those previously given, and hence need not be gone over. It is sufficient to say that the child recovered with the greatest difficulty; but by the end of the first week of March he was clearly convalescent; although greatly reduced, and very pale. He, however, took nourishment, with acid mixtures, and it was hoped he would do well.

March 13th. I was informed this morning that his mouth bled slightly, and that the blood appeared to ooze from the gums. Sent him tincture chlorid. iron, and saw him in the afternoon. Found that epistaxis had set in; the blood looking pale red in colour, like a mixture of currant-juice and water. Purpura patches had appeared over the whole of the lower extremities. Prognosis very unfavorable. Beef-essence and elixir vitriol at short intervals, alternating with sol. potassio-tartr. iron.

14th. Getting worse rapidly. Purpura on arms and breast. In the course of the day, vomiting of coagulated blood, which had evidently passed into the stomach from posterior nares. Vomiting continued; everything was rejected; and in the afternoon, after having passed some bloody urine, the child died, perfectly blanched.
Remarks.—This case is interesting, as confirming, to some extent, Dr. Brown's views of the pathology of scarlatina. Here was, first, a deficiency of red globules in the blood, as was evident from its pale red colour. We infer, also, an increased tenuity in this fluid, as manifested by the hemorrhagic tendency, and which may have been caused either by a deficiency of fibrin, or a preponderance of serum, from paucity of red corpuscles. However we may explain the morbid result, the occurrence of purpura is almost inexplicable under the constant administration of the strongest nourishment and acid solution, unless we admit the coexistence of the scarlatina poison, acting upon the blood to bring it into this dissolved state. At least, this was not congestive or inflammatory purpura.

Would it not be advisable, in every case of s. anginosa and maligna, especially the latter, to administer, as soon as the disease has subsided, and desquamation is beginning, a mild preparation of iron? Might not the fatal termination in this case, perhaps, have been averted by the earlier employment of a ferruginous tonic? Further, would not also the iron, by increasing the eris of the blood, lessen the chance of dropsy? Or, on the other hand, would the iron be capable of increasing the tendency to dropsy, by rendering the blood inflammatory, and so favoring the renal disease, which is so prominent a symptom (if not the cause) of the dropsy? This is quite possible, regarding, as I do, the condition of the kidney in the dropsy of scarlatina as a real, though temporary, acute Bright's disease.

Supposing, however, as does Dr. Brown, that the watery condition of the blood after scarlatina is the cause of the effusion, how can we reconcile with this the benefit derived from venesection in dropsy? If this supposition be correct, are we not, by the abstraction of blood, and the consequent still further impoverishment of that fluid, increasing the tendency to effusion? Instead of which, we find the swelling mostly soon to disappear rapidly after blood-letting. At least, such has been my experience, repeatedly, in bad cases of cerebral and cardiac dropsy; and Watson, in similar cases, gives bleeding his unqualified approval.

These facts militate strongly against the causation of dropsy, as explained by Dr. Brown. For the present, then, we know of no solution of the difficulties presented to us above, and must be content to follow apparently opposite indications, if correct and successful, without being able to reconcile differences.

Case IV.—Scarlatina in Childbed. Scarlatina Neonati.—On the 2nd of July, 1856, I was requested to see the wife of Fred. Schaffer, in an attack of s. anginosa. She was at the end of her pregnancy, and expected her confinement daily. Both of her children had both passed through a severe attack of the disease, and she had been their only nurse. Knowing the disastrous consequences to be apprehended from scarlatina during con-
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finement, I undertook the case with no little anxiety. On the 4th, the premonitory symptoms of labour appeared, which I treated with anodynes, hoping to put off the evil day as long as possible. Moreover, dreading the exhaustion which would be likely, in such a case, to follow the excitement of labour, and still more the debility consequent upon the lochia, (which would act as a drain upon the system,) I sought to prepare the patient for the crisis by moderate doses of carbonate of ammonia, serpentina, and beef-essence. By a cautious use of opiates, the labour was kept off until the afternoon of the 6th, when the woman was delivered of a mature female child, which, however, lived only three or four hours. This child was covered from head to foot with the eruption, of an intensely red colour; and, lest I might have mistaken the naturally florid colour of many newly born children for scarlatina, I examined the fauces, and was surprised to find prominent anginose symptoms, and the soft palate thickly studded with red points. The infant soon became cold, and the eruption changed to a purple hue, which, before death, gave place to an almost indigo colour.

My precautions in regard to the mother proved to be well-timed. In addition to the supporting plan adopted before confinement, she now bore well a generous supply of wine. She made a good recovery; but, a week afterwards, was attacked with subacute rheumatism of the wrists, which yielded to Dover's powders and vinum colchici.

Remarks.—Ramsbotham, in his work on Parturition, highly recommends a stimulating and supporting treatment of the scarlatina of puerperal women, as the only method likely to prove successful; and the above case is interesting, as confirming not only his own views, but also those of Dr. Brown. Morris, in his Lectures on Scarlet Fever, says that "to pregnant and puerperal women it is almost inevitably fatal. I have known several cases which proved mortal, but never heard of a recovery."

These cases, from my own observation, must suffice for my present purpose. They confirm and correspond with, Dr. Brown’s teachings and cases very fully; and this correspondence between two epidemics thus widely separated as to time and space is certainly more than a mere coincidence. It seems to indicate a certain general principle, which underlies, and so essentially determines the nature of this, as of every other affection, through all the variations of climate, locality, and prevailing type of disease. Whether this principle, which Dr. Brown professes to have discovered as regards scarlatina, be the correct one, can only be determined after extensive and frequently repeated experiments.

Finally, to all the evidence adduced by Dr. Brown in favor of the preservative effects of acetic acid upon the blood, it is proper to oppose the testimony of our best American authority, as to its injurious effects in large and long-continued doses. Dr. Wood, in his Therapeutics, says that, thus administered, besides producing gastric and intestinal irritation, "it lowers the organic functions of the system generally, impairing nutrition, depraving the blood, producing anaemia and emaciation, and ultimately, it is said, in-
duding a condition analogous to the scorbutic." The same writer refers to its liability to develop the tubercular diathesis, when taken habitually, as it sometimes is, with a view to obviate fatness. Whether, and to what extent, Dr. Brown's use of the article should be considered toxical, it would be difficult to say; but probably the diluted state in which it is given, and the comparatively short time that it is administered, will save it from being so regarded, except in so far as many of our best remedies are poisons in over-doses.—[Amer. Jour. of Med. Sciences.

Syphilization."

Two or three years ago, a bold young French physician startled the grave deliberations of the Putres Conscripti in the French Academy of Medicine, by the announcement of his having discovered a new method of the treatment of syphilis, with which he proposed to extirpate that wide-spread malady from our nosology. Not only did Auzias Turenne aim at the cure of syphilis in persons already affected with the disease, but he shocked morality by the proposal to render individuals hitherto untainted with syphilis totally unsusceptible of the venereal virus. The French Academy of Medicine met, and an acrimonious discussion ensued. The moral and hygienic objections seem to have been those which were discanted upon; the facts do not seem to have been very carefully inquired into; no experiments were made to test the truth or falsehood of the new mode of treatment; and under the powerful influence of Ricord it was rejected by the Academy, in spite of the protest of Malgaigne and others against this summary decision. In this country, the subject seems to have excited very little interest. One or two journals briefly alluded to it in terms of unqualified condemnation, and the only notice of the controversy from an impartial point of view is given in "Ranking's Abstract of the Medical Sciences," p. 333, vol. xvi., by Dr. Radelis. Since then, with the exception of two papers by Victor de Méric, in the "Lancet" for 1853, no notice has been taken of the subject, and the medical public in this country seem to regard the question as finally settled by the fiat of the French Academy. Not so, however, our brethren on the continent. In Norway, in Sweden, in Turin, and elsewhere, the bold empiricism of Auzias Turenne has been carefully put to the only test capable of deciding the question at issue—viz., that of experiment. Not content with merely declaring against syphilization as unheard-of and unjustifiable, Professor Boeck in Christiania, Danielson in Bergen, Carlsson in Stockholm, and Sperino in Turin, have for some years past been engaged in a series of careful

*This article, so extraordinary in its facts and doctrines, consists of brief extracts, which however will be sufficient to develop the fundamental, and it may be added, almost incredible principles recently deduced from numerous experiments made by a gentleman of distinguished reputation and reputed competency.—Ed.
experiments and observations to determine the truth or fallacy of Turenne’s practice. It is plain that experiment alone can decide the question; theory here is but of little avail, and would be of no more use in disproving stubborn facts—if such they really be—than if it were directed against the efficacy of mercury in primary syphilis, or of quinine as an antidote toague. The French Academy seems to have rejected the practice of Turenne without putting it to the proof; indeed, as we observed before, the moral question alone was tried, and found wanting, while the actual facts seem hardly to have been discussed at all.

Auzias Turenne, a young French physician, commenced about the year 1844, a series of experiments, with the view of testing the validity of John Hunter’s doctrines of the non-communicability of syphilis to the lower animals. After many experiments and several failures, he succeeded in producing in monkeys inoculated with chancre matter a disease which had all the characteristics of true chancre. This was at first admitted in the French Academy, but at a latter period was denied. However this may be, it is quite certain that a contagious disease was communicated to the poor animals, and that from these it was transferred to rabbits, cats, and horses. The malady was again from these returned by inoculation to the human species, the first trials in this regard having been made by Dr. Robert Weltz, of Würzburg, on his own person. On four separate occasions, Dr. Weltz succeeded in producing an unmistakable chancre on his own person, by inoculation from animals, and this was acknowledged even by Ricord.

While Auzias Turenne was thus engaged in researches on the transmission of syphilis to animals, he became aware of the curious fact, that each succeeding chancre produced by inoculation became less and less in each animal, until at length a period arrived when inoculation apparently lost all its power, and no chancre or sores of any kind followed the application of the venereal virus. From these facts he drew the inference, that by prolonged inoculation with the syphilitic poison, a constitutional state or diathesis was at length produced in which the system was no longer capable of being affected by syphilis. This condition he terms “syphilization,” and upon this asserted discovery all the subsequent experiments and peculiar mode of treatment are based. Auzias Turenne and his followers contend that by such a process of prolonged inoculation the system becomes protected for the future against the venereal poison, just as an individual who has had small-pox cannot take the disease a second time. To obtain perfect syphilization or immunity, the individual must undergo constitutional syphilis; but he must be forced rapidly through this disease by repeated inoculations, in order that it may not injure the constitution.

The abortive experiments of Diday in 1849, require but little notice. He proposed to inoculate with blood drawn from a person laboring under tertiary syphilitic symptoms, so as to prevent, as he
imagined, the poison from entering into the constitution at all. Although this proposal was apparently based on one of Ricord's supposed "laws"—viz., that constitutional syphilis never affects an individual but once in his lifetime, it was also in direct contradiction with Ricord's positive opinion, "that tertiary syphilis could not be communicated by the parent to the child." After a series of experiments, Auzias Turenne's doctrines were laid before the French Academy of Medicine (November 18th) in 1850; and as might be expected, opinions so novel and so startling met with the most vehement opposition. Turenne had, it seems, only recently commenced at that time his experiments on syphilization in the human subject; he had, therefore, few or no data for the support of his opinions, and he not only proposed to employ syphilization for the primary and secondary forms of venereal diseases, but suggested the use of this treatment as a prophylactic against the contagion of syphilis in persons as yet untainted with that malady. It was upon this latter point that the discussion mainly turned, and here the indignation of his opponents was unbounded at the audacity and immorality of such a proposal. We cannot deny that they had right on their side; the proposal was not only immoral, for the disease is one to which an individual voluntarily subjects himself by a lapse from the rules of morality, but it was also most injudicious to subject a perfectly healthy person to the danger of incurring a malady from which he might never again be able to free himself. The true mode of determining the question—that of experiment, carefully conducted and often repeated—was not adopted, and an application by Turenne for leave to prosecute his researches in the Hopital St. Lazare was negatived by the Commission. Hitherto, not being permitted to pursue his investigations in a hospital, he had only experimented on a few cases in private practice, and these were necessarily too few and two scanty in the details to be implicitly relied upon. The real question at issue, that of the reality or non-reality of syphilization, was left untouched. Malgaigne, Depaul, and others in vain protested against the sweeping condemnation of these proposals before the truth or falsehood of the doctrine had been determined by experiment; the great influence of Ricord and his partisans prevailed, and the proposals by Auzias Turenne were unequivocally condemned. Shortly after, a strong case appeared in favor of the opponents of syphilization, in the person of a Dr. L, who had allowed himself to be inoculated to produce syphilization, and was now covered with venereal sores. While matters thus proceeded in Paris most unfavorably for the advocates of syphilization, the question was being investigated on a large scale, and in a more complete manner, by Spierino of Turin. This physician had great advantages for the prosecution of his researches, as he was attached to the Syphilocomo, or Venereal Hospital, of the city of Turin. He had long remarked that large suppurating buboes healed more rapidly when their syphilitic character was tested according to Ricord's
plan, by inoculation of the surrounding parts; and moreover, that when the primary chancres were large and obstinate, the inguinal buboes were smaller and less freely developed. The longer the local disease lasted, the less chance there seemed to be of constitutional syphilis. Sperino made his first report on the subject to the Medico-Chirurgical Academy of Turin on the 23d of May, 1851. In this report he gives the full details of fifty-two cases treated by him in the Syphilitico of that city. If Sperino was not the first to employ syphilization for the cure of venereal disease in the human subject, he at all events first performed a regular series of experiments and observations to test the truth or fallacy of Turenne's doctrines.

"The subject of M. Sperino's experiments were fifty-two hospital patients, all prostitutes, and all suffering from aggravated forms of primary or secondary syphilis. The virus was taken from the person syphilized, or from a comrade—from the first if possible. The inoculations were repeated once or twice a week in three or four distinct places, usually in the abdomen. The time required for the establishment of the artificial chancres was from two to three days. The effects of the second inoculations were less serious than the first, the third than the second, the fourth than the third, and so on, until the virus ceased to produce any effect whatsoever; contemporaneously with which epoch all former ulcers had healed, and buboes, recent nodular enlargement of bones, and cutaneous stains or blotches, had either disappeared altogether, or were rapidly going away."

The virus also, which made no impression at that time, was found to retain all its virulence when tried on an unprotected person.*

Sperino's observations were confirmed by similar results obtained by Dr. Gamberini at Bologna, and by Gulligo at Florence. The report of the Commission appointed in this case, as at Paris, was unfavorable, but it did not extend to the prohibition of further experiments, and Sperino has ever since followed up this treatment in the hospital under his charge. In 1853 he published a detailed account of ninety-six cases of syphilization in a bulky volume of 903 pages.

Not only are certain cases ill fitted for syphilization from previous mercural treatment, but the state of health of the patient must be taken into consideration before submitting him to this prolonged and painful treatment. Dr. Boeck advises that we should not syphilize when any inflammatory diathesis exist in the system, as in such cases the artificial chancres may take on a malignant action. Habitual spirit drinkers, and persons of very weakly constitution, should not be subjected to this treatment. The bowels should be regulated, and the digestive organs should be brought into good order: but it is not necessary to enforce any strict rules of diet. In

*See Dr. Radcliffe's Report on Surgery; Ranking's Abstract, vol. xvi., p. 334.
the hospitals of Bergen and Christiania, the ordinary full diet of the hospital was always allowed. With regard to obtaining the patient's consent to the treatment, no difficulty seems to be found either in the Scandinavian or the Italian hospitals. Both Sperino and Dr. Boeck mentioned the readiness with which patients submitted to, and even sought for the mode of cure which they had seen to be so successful in their fellow sufferers.

Various methods of inoculating the venereal virus have been adopted by the advocates of this system. Auzias Turenne at first kept up a succession of single chancres; while Sperino made three or four separate inoculations at once, and repeated these two or three times in the week. After having in this way reached the number of twenty-four or thirty inoculations in all, he found that the chancres last produced were exceedingly small, and he then diminished the intervals, and made more inoculations at each sitting. He found that the first chancres were deeper, larger, and more inflamed than those which succeeded them; and that by diminishing the intervals and increasing the number of inoculations, the earliest chancres visible diminished, and were less painful and inflamed. To test this still further, Sperino ventured upon as many as sixty inoculations at once upon the same individual; but the result obtained was that immunity to further inoculation set in before the syphilitic symptoms were cured, and relapses of the disease frequently ensued. He therefore returned to his former plan, and now inoculates for six to ten chancres at each sitting. While these chancres are progressing, it is neither necessary nor advisable to inoculate afresh, nor should this be done until the former chancres are developed. Should the chancres be developed too freely, and threaten to produce active inflammation, or to extend as phagedaenic sores, he checks their progress by inoculating afresh at shorter intervals.

The practice of Dr. Boeck differs very little from that of Sperino. At first afraid of producing too serious an impression upon the system, Dr. Boeck inoculated for two chancres only every six days, selecting that period of time, because he found from experience, that it required about five days to produce induration in a chancre; although he does not, as we have already seen, consider this latter circumstance absolutely essential. Subsequently he has shortened his intervals to three days, and increased the number of inoculations to eight or ten. Less time is thus required to produce immunity; but Dr. Boeck has a wholesome distrust of those cases which are pushed too rapidly through their course of syphilization.

With regard to the most favorable points in the body for inoculation, Sperino placed his punctures on the lower part of the abdomen, while Dr. Boeck prefers inoculating on the arms and thighs. Accompanying each of his observations in the volume before us is a lithographed outline plate of the human figure, with the points of inoculation, and the date of each; while lines drawn from the arms
to the thighs enable us to follow the transpositions of the virus from one chancre to another. By this simple figure it is easy to trace the progress of the treatment, to see the number of inoculations at each sitting, and the source from which they are derived. * *

We think that the advocates of syphilization have established a claim on the profession to a fair trial of their system. It is evident that its employment is not fraught with danger, as is the case with so many remedies proposed from time to time; and the investigation of the subject seems to open up a new field for the further study of one of the most malignant and most lasting and destructive poisons that affect the human frame.—Brit. and For. Med. Chir. Rev. for April 1857.

Professor Boeck on Syphilization.—If it be evident, as I think it is, that the remedies hitherto used against syphilis are uncertain, and even pernicious, then it is not only allowable, it is our duty to try the new one that is offered to us. To me the only question was—in what cases syphilization might be used. I have already mentioned that I always thought prophylactic syphilization to be an absurdity. Therefore, I shall not dwell any longer on it. The question is—whether syphilization ought to be used in all cases where syphilis exists? This question is easily answered. I cannot predicate with certainty if all those who get primary syphilis will get constitutional disease. The simple chancre is not in general accompanied by any constitutional affection. The Hunterian one is certainly a consequence of a constitutional syphilis, but we may easily deceive ourselves in respect to the induration. Therefore, I never use syphilization where there is merely primary syphilis. It is not until the constitutional symptoms have appeared that I consider this method allowable, for then I am convinced that I do not introduce anything into the organism but what is there before. I cannot double a malady already present. So I am quite certain not to do any harm to the patient.

This may be the fit place for mentioning shortly how I produce syphilization. Without any other preparation than a bath, or in my private practice even without this, I apply on each thigh, and on each arm, or on the sides only, three inoculations in every one of those places, with matter taken from a primary ulcer, or from an artificially produced one in a person who has been syphilized. I choose the first named places for those who are lying in the hospital, but I inoculate the sides of those who, during syphilization, are going out attending to their business. However, I must add, that I never confine my inoculations exclusively to the sides. If they do not prove effectual there, I apply them on the thighs, on which we shall almost always find the ulcers to be larger, deeper, and of a longer duration. Therefore, I think this place the best, and never fail inoculating there. Every third day I inoculate anew. As long as the last inoculations produce pustules, I take the matter from
these. In some cases I have always tried to take the virus from
the first made inoculations, thinking to find there the strongest mat-
ter, and thereby, perhaps, be able to achieve the cure in less time;
but the cases in which the treatment has been accomplished in this
manner are so few, that I should not venture to draw deductions
from them. In syphilited children, I have only applied one inocu-
lation on each thigh, and generally also on each side, every third
day, or perhaps at longer intervals. The ulcerations produced in
this manner may occasionally become phagedænic in grown-up
persons. Many wounds may be united into one, and form a large
ulcerating surface. This, however, does not signify in the least,
provided the treatment be continued without being alarmed. The
inoculations are a certain remedy against the phagedænic ulcer-
ation. In children, the ulcers are generally so small as not to cause
any inconvenience. It is only in cases which have been mercu-
rialized before that I have sometimes seen the artificial ulcerations
enlarge, yet never to an alarming degree.

In some instances the inoculated person becomes proof to one
sort of virus. I then take the matter for inoculation from another,
preferring a case which has had a different origin. This then proves
effectual. But sometimes they become proof to this also, and I then
seek for a third source; and thus I go on as long as any matter at
all will operate.

Moreover, it is worth noticing that immunity does not occur, and
the syphilitic phenomena do not vanish, earlier in children than in
grown-up persons. The time necessary to produce immunity is
about three months. However, it depends upon the number of
inoculations that may be employed—upon the symptoms that have
taken place; and in children it seems to depend upon their syphilis
having been acquired or inherited. The quality of the virus even
may not be without influence. When immunity is attained, the
syphilitic phenomena generally vanish. However, should this not
be the case, it should cause no uneasiness, as they will certainly
vanish within a short time, without any remedy being used.

It is not uncommonly the case, that during syphilization a new
eruption takes place; but this always exhibits symptoms of the same
nature as were observed at the beginning of the process of syphil-
ization. These eruptions need not cause any anxiety. The opera-
tor may quietly go on inoculating, and things will proceed as in
other cases. One phenomena that I have often seen develop itself
under syphilization is iritis. This has been very intense in some
cases; but I do not make it the subject of any special treatment,
either antiphlogistic or derivative, and the result has hitherto been
always favorable.

The syphilitic poison does not run a rapid course, as was known
a long time before we heard anything of syphilization. We often
see the constitutional symptoms not to show themselves until after
some months. Therefore, there is nothing astonishing in the fact,
that the curative results of inoculation do not show themselves until after some time.

But if even by syphilization alone we cannot effect a cure in all cases, it is, nevertheless an indispensable remedy. Patients who have been nearly destroyed by syphilis and mercury may be restored by it to health. The cases belonging to this class may present very different aspects, and the effect of syphilization on them, of course, also different. I therefore think the best way to give my view of the matter is to arrange them in separate groups, viz:

1st. The early constitutional cases recently treated with mercury, in which the same symptoms have reappeared. Here syphilization will, in some cases, produce as certain an effect as in cases not treated before, but we oftener find some irregularity. The phenomena vanish and return again. That which I have said takes place in the individuals not mercurialized is repeated here; namely, it is always the same forms which existed at the beginning of the syphilization that return.

2nd. The affection may still be confined to the cutaneous system and the pituitous membranes, but the tubercular forms may be predominant, ulcerations on mucous membranes may go deeper, or the affection may be in the subcutaneous areolar tissue. We may even have the tubercular serpigenous syphilide.* These affections are more slowly acted upon. The reason for this may partly be found in the fact, that these forms are often rather of old standing. Mercurial treatment, iodine, etc., have been used against them, and we also often see bad forms show themselves within a year after the primary affection. This seems to depend on individual constitution, for it often has no relation to the quantity of mercury, or the care taken of the patient during the treatment.

If, in these cases, new eruptions come out during syphilization, we shall always find them to be more superficial than the earlier affection, if even they have the same form as that which existed at the beginning of the syphilization treatment. It happens in these cases, especially, that the inoculations, after a small number of them have been made, do not produce any effect, then we must give iodine, after which again we shall have larger pustules and ulcers.

3rd. Affections of the osseous system. Here syphilization hardly ever seems to produce any effect. But when iodine has been used earlier, producing results of only a short duration, then syphilization, united with iodine, seems to relieve the nocturnal pains more certainly: but osseous tumors remain unaltered by syphilization.

4th. Affections of the nervous system—hyperaesthesia and incomplete and complete paralysis—may occur: First, in combination with other syphilitic symptoms, and in those cases I have seen them diminish under the influence of syphilization. Secondly, they may be the only phenomena left as the result of the mercurials used against the primary syphilis; and, under these circumstances, we

* Radesyge.
see little or no effect from syphiliation. However, I must observe, that all the cases of that sort which I have hitherto treated have been of old standing, and have for a long time been treated with iodine, etc.

5th. Mental maladies, finally, may be the result of the mercurial treatment. I have had no opportunity of employing syphiliation in such cases, but I consider it well worth trying. The idea that syphiliation should be the last refuge, seems to be quite as if quina should not be given in the beginning of an intermittent, but that the system should be first injured by different other medicines, and then quina given afterwards.

As the result of the great many observations made with syphiliation, it seems sufficiently proved that the syphilitic virus heals constitutional syphilis, and that it cures the malady without doing any harm whatever to the organism. On the contrary, we see that the uneasiness, the rheumatic pains which often accompany constitutional syphilis, vanish under continued inoculations.

The immediate effect of syphiliation upon the organism is generally also very favorable, but there are some who have thought that it may, perhaps, operate perniciously in future time. To this I have only to say, that I can show many individuals discharged from hospital more than three years ago, who have remained in uninterrupted good health, and that in not one of the persons treated in this manner, can I point out any unfortunate result whatever, which could be ascribed to syphiliation.

If, finally, I were to comprehend, in a few words, my opinion about syphiliation used as a curative remedy, I should say—

1. Syphiliation is undoubtedly useful against syphilis; it is the only certain remedy that we know, and it is not pernicious to the organism: mercury, therefore, ought to be banished as a curative remedy.

2. Syphiliation is not so certainly useful against mercurialized syphilis, but it ought always to be tried. It often does cure it entirely, and it at least does not fail to do some good in the greatest number of cases.

3. The application of syphiliation against other maladies than syphilis ought to be tried with the greatest possible care and exact observation.—[Glasgow Med. Jour., from Dublin Quarterly.


What is Dysentery? This interrogatory has, doubtless, propounded itself to the mind of every scientific member of our profession, yet the problem has never been explained, so as to be of practical importance to the medical fraternity, or of benefit to suffering humanity. The theories existing are too numerous to relate. Pathologists, however, harmonize more in regard to its nature than its
Observations on Dysentery.

therapeutics. There is no disease in the whole catalogue of human complaints, that has received so varied a treatment, as the one under consideration. No two authors agree, in every respect; no two practitioners coincide in every particular; and many eminent ones occupy antagonistic positions.

They tell us on the other side of the Atlantic, that dysentery is "purely an inflammation," and the theory, in this indefinite condition, has been endorsed, to some degree, on this side of the "Great Waters." The expression of the above quotation, is very vague and meaningless. Gonorrhœa is "purely inflammation," and, so is gastritis, yet they differ wide in their pathology, etiology and therapeutics. In general terms, dysentery is "purely an inflammation;" but what kind of an inflammation is it?

There are two kinds of inflammation—common and specific. They differ in respect to the causation, and the tissue complicated. The causes of common inflammation are traceable, definite and direct, while the causes of specific inflammation are obscure, indefinite and indirect. The common phlogosis is mostly confined to deep-seated tissues, while the specific variety is generally situated on the skin and mucous membranes. Erysipelatous inflammation is the general nomenclature for inflammatory affections of a specific character, of the skin and mucous membranes.

Is dysentery a specific inflammation? Our answer is in the affirmative. Now for the proof. We will take up and examine the different phases of the disease, and see if the theory advanced can be sustained.

Dysentery is situated, or located, generally in the sigmoid flexure of the colon, or the adjacent intestine, below or above, more frequently below. Why is it that it always attacks this part in preference to any other portion of the alimentary canal, or any other canal with a mucous membrane? Let us make four divisions of the alimentary tube, and briefly examine their anatomical structure separately, and then compare the result. First, the cesophagus, is composed of three coats, layers or membranes. They occupy the following relation to each other: 1st, mucous; 2nd, cellular; 3rd, muscular. The first, or mucous membrane, has a basement membrane which is profusely supplied with blood-vessels and nerves. The second, or cellular coat, connects the muscular with the mucous membrane, and transmits the blood-vessels and nerves, from the muscular to the basement of the mucous membrane, consists of two layers; the fibres of the external are longitudinal, and those of the internal are circular. The stomach is of the same structure, excepting the addition of a fourth or serous coat. The small intestines, like the stomach, possess four membranes. The mucous membrane is longer than either of the other layers, and hence must be thrown into numerous folds, which are called valvulae conniventes. They differ from other folds of mucous membrane in being fixed or permanent. The surface of the mucous membrane, is covered with
a number of papillary projections, called villi, which impart a soft and velvety feeling to it. In the small intestines are found the follicles of Lieberkühn, glands of Peyer and Brunner, and the solitary glands. Let us now descend to the large intestines, and examine their construction. Here we find a mucous membrane, not unlike that of the small intestines, excepting the absence of the valvulae conniventes and villi; it is whiter, thicker and coarser than the mucous coat of the small intestines. The follicles or crypts are numerous. The cellular layer is the same as found elsewhere in the alimentary canal. The muscular membrane, like that of other portions of the intestines, consists of two fibres, longitudinal and circular. The serous coat is the same as found everywhere, only it has numerous folds of fat, which are called appendices epiploicae.

We have briefly run over the anatomy of the alimentary tube, and find its structure pretty much the same, from the mouth to the anus. We have examined in vain, for a reason why dysentery should be located where it is. There is no rational or explicable reason revealed by anatomy, why it should be situated in the sigmoid flexure of the colon; if there was, then there would be one argument less in favor of the theory advanced.

Pathologists, who call dysentery "purely an inflammation," inform us that there is none of that redness and softening revealed by pathological investigation, that is so characteristic of gastritis and enteritis; but that there is always more or less ulceration, and in many cases, the diseased bowel is an "irregular, confused and tattered mass of disorganization." Why is it that in enteritis or gastritis there is redness and softening, and in dysentery the bowel is ulcerated, and is often an "irregular, confused and tattered mass of disorganization?" Pathologists explain why this difference in pathological lesions, and another argument is crushed.

The danger to be apprehended in typhoid fever, is peritonitis resulting from perforation of the intestines, and in this fever every organ and tissue of the system is in an unfavorable condition to take an inflammation, because the very elements, or, at least, the concomitants of inflammation, are below the normal standard; yet, in dysentery, when, according to the common hypothesis, the elements of inflammation are in the excess, and the bowel ulcerated, and often an "irregular, confused and tattered mass of disorganization," extensive peritonitis rarely supervenes. Why is this? Because inflammations differ in respect to the tissue diseased, and specific inflammations never attack serous membranes—have no affinity for them.

The most important and pathognomonic sign connected with the symptomatology of dysentery, are the hæmorrhagic discharges. Is hæmorrhage a natural consequence, and concomitant of inflammation of mucous membranes? Most assuredly not. Inflammation of the mouth and oesophagus is not attended with hæmorrhage. Hæmatemesis is no indication of gastritis.
In enteritis, there are no hæmorrhagic evacuations. And all these diseased organs have their cellular membrane profusely supplied with bloodvessels and nerves, afferent and efferent, direct and indirect from the spinal cord. The bleeding, which is sometimes excessive and alarming, that occurs in dysentery, establishes beyond all cavil, the specific character of the disease.

The period of the year in which dysentery prevails, and commits its desolating ravages, indicates much in favor of the theory advocated. All common inflammations are most rife in the cold, dreary and desolating winter, and the ever vascillating vernal months. They are more frequent at these periods, because their causes are more abundant, direct and definite, than at any of the other seasons of the year. The disease under consideration, makes its appearance in the latter part of summer, and generally disappears at the approach of cold weather. These facts are unquestionable evidence, that the cause or causes of dysentery are quite different from the etiology of common inflammations; and inflammations are classified, common or specific, according to their causes. Cold is one among the chief causes of inflammation, but it cannot produce dysentery, for then the disease would be mostly confined to the period when ordinary local phlegmasia exists. Imprudencies of every kind are a prolific source of common inflammations. It is true, the violation of the laws of nature is detrimental to health, and may hasten on, and aggravate the symptoms of any disease, epidemic or endemic; but to suppose that dysentery is dependent upon imprudencies of any description for its existence is the very height of supererogation. It is no respecter of persons. Its frequency is as great in the affluent mansion, as in poverty’s hovel. It is found as often, and its mortality is as great, on the mountain’s top, where health-disseminating breezes waft, as along the river shore, or in the low and marshy lands, whose poisonous effluvia pervade the atmosphere.

The etiology of dysentery, like that of those terrible scourges, algide cholera and yellow fever, is much in obscurity. The chief cause—the predisposing cause—is essentially epidemic. It exists in the atmosphere, manufactured or brought about in some manner, by unnatural changes or conditions of the summer and autumnal seasons. The exciting causes are any and everything, that has a tendency to undermine the normal foundation of the whole system of organs of the human economy.

If dysentery was a common inflammation, venesection to decrease the volume of blood, mercury to diminish the amount of, and check the formation of fibrine, tartar emetic to reduce the action of the heart, and equalize the circulation, and numerous other antiphlogistic agents, would check the disease as quick as they would pleurisy. Will antiphlogistics cure common inflammation? They will. Do they cure dysentery? Would to God they could, but they can’t! Experience has taught that we may bleed, mercurialize and antimo-
nialize, and the tenesmus, tenesmus and hæmorrhage will continue unabated, if not, in many cases, aggravated. In many cases of a very acute nature, in a plethoric patient, the judicious employment of the lancet is of great advantage; but in a large majority of cases the prostration contraindicates it. Experience has taught that bloodletting has no influence over the duration of the disease. Mercury as a sialagogue—not as a defibrinizing agent—is generally beneficial, because the secretion of the liver is invariably checked. Tartar emetic is of no advantage.

Anodynes and cathartics are the remedies most successfully and generally employed. Injections of nitrate of silver through long tubes are thought to be good. The treatment that is generally employed at this time, and the fatality of the disease, point distinctly to a specific disease. But to tell what kind of treatment is best, is not the object of these "observations." That is reserved for a future paper.

It is admitted, with regret, that the profession knows but little in regard to dysentery. But the science of medicine, like everything in this fast age, is rapidly advancing, and it is confidently anticipated, that before many years will have passed away, some Jenner-like mind will rise up and throw off the mantle of obscurity that is suspended around this disease. * * * * * *


The Pathology of Milk Sickness, in Parke County, Ind. By Dr. John Pickard.

Thinking the pathology of milk sickness, as it appears in Parke County, Ind., taken from observations of citizens who have been acquainted with it for thirty years, might be interesting to some of the readers of the Journal, I have prepared the following imperfect article. So little is known by our book making physicians, that they give us no information worthy of note; and so contradictory are the investigations of physicians, who have come in contact with it, that it is impossible to come to any definite conclusions, from the reports we find in the journals. The views given in the April No. of the Journal, relating to the Etiology of the disease under consideration, very nearly correspond with the following experiments, which conclusively show that it is not vegetable, animal, or malarial. A farmer living about a mile from where the disease is known to exist, allowed his cattle to run out, but they never reached the infested district until the dew evaporated from the vegetation; the result was, his cattle nor his family were ever attacked by the disease; were it a vegetable, the absence of the dew would not destroy its poisonous qualities.

Another family having suffered from its ravages, ploughed up
a pasture field, digged around the stumps, thoroughly turning all the soil, and sowed the field in grass, upon which they have kept their stock for twenty years, and at no time has milk sickness made its appearance; while on other portions of the farm uncultivated, it is as fatal as ever. Whether the poison is a mineral or a gas is yet to be tested; but I am inclined to believe it a gas much heavier than the atmosphere, consequently resting upon the vegetation; dry weather seems to favor its production. Last season it was prevalent in many districts, where it had not made its appearance for a number of years, but in no instance did it attack animals kept upon cultivated ground. It may be in the water, but we are not acquainted with any district where this has positively been proven. It, however, seems improbable when the disease prevails upon the neplands, and the springs from which the stock drink flow through the bottom lands, and is used there by other stock, yet the disease never makes its appearance among them.

All species of animals are liable to be attacked by milk sickness, the graminivera, first and among those the sheep appears to be the most easily affected; the carnivera always obtain it from the flesh of animals that have died with the disease. It is often concentrated in the milk of the cow, and the calf will be attacked when the cow shows no symptoms of disease. Animals well fatted are not liable to be attacked. A farmer in this vicinity, kept his horses on a lot of one acre, and fed them on hay and oats, the disease soon made its appearance among them; he then turned his hogs upon the same lot, fed them all the corn they would eat, and they showed no symptoms of the malady. From the observations and experiments which have been made where the citizens have suffered severely from the loss of property, and the lives of those still dearer to them, we deduce the following conclusions. 1st. Milk sickness is caused by a poison, this poison is generated near the surface of the earth, from some peculiarity in the soil or the soil and atmosphere combined. 2d. That the poison is a mineral or heavy gas, which appears to be produced in the night and destroyed by the rays of the sun. 3d. A thorough cultivation of the soil will destroy it. 4th. That it may be communicated from one animal to another by the flesh or milk. And 5th, that oleaginous substances act as a preventative, and will often cure animals affected with the disease. There is no difficulty in the diagnosis, the patient invariably complains of great weakness, inability to perform labor, a small amount of exercise produces trembling and fainting sensations; as the disease advances, vomiting, and obstinate costiveness are invariable accompaniments, and during the whole time a peculiar odor pervades the room, unlike anything we have ever met with.

The treatment of milk sickness is simple; we have previously stated, that oleaginous substances are preventives, and we have
found no remedy so efficient as Oleum Ricini, by the stomach, if possible, if not, give enemata. Apply sinapisms to the stomach, give cooling mucilaginous drinks, overcome the costiveness as soon as the nature of the case will admit, and you have conquered the main obstacle to successful cure.—[North-Western Med. and Surgical Journal.

A Case of Puerperal Convulsions, treated with Chloroform. By Wm. Dickey, M.D., of Centerville, Wayne county, Indiana.

I was summoned on the evening of the 26th of April, 1853, to attend Mrs. B. T——, a robust woman, in labor with her first child. Being informed, on my arrival, that she had had two convulsions, I immediately examined her per vaginam, and found the os uteri pretty well dilated. Her pulse was rather full, but did not indicate any great degree of arterial excitement. As the labor was progressing rapidly, nothing was done to alleviate her sufferings, until after the delivery of the child, which took place in about one hour and a half after my arrival. Up to this time she had had six convulsions. The pulse was not so full, but more frequent—the carotids beat violently, and the convulsions occurred at short intervals. The face was quite livid, and consciousness did not return during the intervals of the convulsions. As I had but little confidence in the efficacy of blood-letting, I told Dr. Isaac Carey, who was in attendance prior to my arrival, that I would try the influence of chloroform. The Doctor yielded to my proposition. Having no chloroform with us, we had to send four miles to procure it. When we had obtained the medicine she had had twenty-three convulsions. They were recurring every few minutes, and she was black in the face and comatose—the pulse more feeble and frequent, and to all appearance the case seemed likely to terminate fatally. The chloroform was administered for three quarters of an hour, the amount inhaled being governed by its influence on the circulation. She did not have a single convulsion after the administration of the chloroform, although the coma lasted for two days. I do not know the subsequent treatment, as she was in the hands of Dr. Carey.

I regard puerperal convulsions as the result of depressed innervation, and engorgement of the venous and capillary systems; either of these may be first affected, but in the end both become involved. Medical writers have taught that puerperal convulsions are associated with a tremendous rush of blood to the brain, and a state of compression of that organ; so that blood-letting has been considered as almost the only agent capable of arresting such a formidable disease. And it is not to be wondered at when the physician is called to witness an attack of the disease; the quickly repeated spasms; the flushed face become even livid and black;
the violent beating of the carotids, and the distended jugulars, with a full and frequent pulse—that he is almost certain to conclude that blood-letting is the sheet anchor. And now, as he has been previously taught, he bleeds his patient without regard to quantity; he bleeds her at short intervals until the convulsions cease, or his patient dies. A true representative of this practice is Dr. Dewees. See case second and third, in his work on the practice of Midwifery, pages 464—65. In the second case "the patient lost one hundred and twenty ounces of blood in the space of six or seven hours, and about one hundred and forty altogether." From case third, was taken during the first five hours, one hundred and twenty nine ounces. "The convulsions now ceased for twelve hours. At the end of that time the Doctor was called in suddenly, on account of her breathing becoming more laborious and loud; the face more flushed, with some convulsive agitations; the Doctor thought best to abstract ten ounces more by cups, and the woman lived." And truly this is astonishing, especially if she lost much blood by flooding after the delivery of the child.

No doubt blood-letting may sometimes prove a valuable remedy. It is, however, believed to be, either in venous engorgement of the capillaries, or depressed nervous function, nothing more than a preparative measure to more efficient remedies. The cases in which it may be employed, are, where there is strong action of the heart, great throbbing of the carotids, and general plethora.

There can be no question that at the full term of utero gestation, and especially when the uterus has commenced its vigorous contractions, that it acts by sending a sudden shock to the nerve-centors, and the impulse transmitted to the circulatory system, gives a determining course of the blood to the brain. In this condition it is very probable blood-letting is essential, more, however, as a palliative than curative means.

If we are correct in our conclusions, it is obvious that the abstraction of blood can do but little to remedy a toxic condition of the blood, and still less, will it be adequate to remove a lesion of innervation.

The object of the writer in penning these thoughts was not to write a systematic treatise on the disease, and discuss the efficacy or inefficiency of the different articles of medicine used, or means employed in the management of the affection but to condemn the pernicious practice of copious depletion, and to draw the attention of the profession to the employment of chloroform in the management of this disease.

The condition in the disease being a loss of innervation, whereby the capillaries lose their tone, the circulation becomes interrupted, and venous engorgement follows. If we are correct in our notions of the modus operandi of chloroform, it fulfils the indications. The first impression is probably gently stimulating, thus
equalizing the nervous energy. And as the congested capillaries are under the direct control of the nerve centers, it is very likely the new stimulus gives toniciry to the capillary vessels, and a better circulation. And as we continue the remedy, and obtain a stronger anaesthetic influence, insensibility follows, and the spasms cease. A sufficient number of cases have been reported, that terminated favorably under the use of this remedy to entitle the profession to some confidence in its virtues.—[Western Lancet.]

On some of the Effects produced by Curious Teeth.

To the Editor of the Lancet:

Sir,—The perusal in the Lancet of the interesting practical lecture by Mr. Smith, of Leeds, on the above subject, recalled to my mind three cases somewhat analogous to those related in Mr. Smith's lecture, which have come under my own notice during the last two years. Their true nature and obvious treatment did not occur to myself, and a statement of them may be useful to some of your readers. The three patients were all young men, between the age of twenty-five and thirty years, and, curiously enough, they were all affected on the left side of the face.

1. R. S——, by occupation a coachman, footman, etc., to an old gentleman, called upon me two years ago to get something done for a sore on the centre of his left cheek. He said it had been a boil, which suppured and broke about two months previously. His face was much swollen, and as he had to wait at his master's table, it rendered him unfit for his work. The patient had consulted another surgeon, and had tried various remedies, but could not get it healed. He was otherwise the picture of health. I thought it might be some chronic affection of the parotid gland, strumous or otherwise. I gave him some zinc lotion to inject into the opening, and to apply a bit of rag dipped in the same, and covered with oiled silk. In about three weeks he came to tell me that the sore was healed, but his cheek was swollen. I gave him iodine to apply over it. There was an ugly cicatrix where the sore had been. In the course of another month the patient came again, presenting an abscess ready to burst in the old place. I opened it, told him to poultice it for a few days, and then use the former treatment. In about three months he called again, and told me that after he last saw me, being useless in his situation, he went home to Edinburgh, where he saw Professor Syme, who gave him something to use, and that the sore did not heal for six weeks after I opened it. The Professor told him that the sore arose from a wisdom tooth coming up, for which there was not room in the jaw, and advised him, if the sore did not heal, or should trouble him again, to have the adjacent tooth extracted. His face was now much swollen, and an abscess was evidently forming again. I examined his mouth, and saw that he had got
the upper wisdom teeth only, and there was evidently a want of space for those below. I accordingly extracted the second molar tooth, after which the swelling gradually subsided, and the wisdom tooth soon filled up the vacant space. He was now permanently cured.

2. Some months before I saw the last case, R. T.—, a forester by occupation, came to me with a large abscess on the left cheek, about an inch above the angle of the jaw. I opened the abscess, and by using poultices for some days, and water dressing afterwards, the sore healed in about two weeks. Shortly after I extracted the tooth from case No. 1, I was again visited by No. 2. The abscess was now the same as before; but observing the similarity between the appearance of this case and the former, I examined his mouth, and saw that he still wanted the wisdom tooth in the left lower jaw, for which there was evidently no room, and the gum round about was a good deal inflamed. It so happened that a year or so before he came to me with the first abscess, I had extracted the second molar tooth in the right lower jaw for tooth-ache, the place of which was now filled up by the wisdom tooth. I now extracted the same tooth on the left side, when the abscess broke into the mouth, and the wisdom tooth replaced the removed one as before. He has not been troubled since.

3. A. T.—, a dealer in tea, consulted me four months ago for a swelling on his cheek. I found that an abscess was forming. The treatment and results were the same as in the other cases, with the important exception that, having recognized the nature of the case before the abscess broke on the cheek, I saved this patient from having an ugly cicatrix, as the other two unfortunately had, and will have as long as they live.

I am, sir, your obedient servant,

Peebles, 1857.

ROBERT CRAWFORD, M. D.

On the combined Local and Constitutional Treatment of Hooping-
Cough. By Ravenhill Pierce, M.D.

As I consider it the duty of every medical practitioner to bear testimony to any successful method of treating any peculiar disease which may have fallen particularly under his notice, I beg to press upon the profession the plan I have adopted in that troublesome and painful-to-witness disease—Hooping-cough. In seventy-five cases, (thirty-two boys and forty-three girls,) varying in age from two to eight years, which came under my care during last autumn, in a school containing over a thousand children, I used the local treatment recommended by Dr. Eben Watson,—viz., spurring the glottis once a day with a strong solution of nitrate of silver, (one scruple to one ounce of distilled water,) by means of a curbed probang; and in combination with this I ordered Dr.
Camphor and Epilepsy.  By JOSEPH O. BROOKHOUSE, M. R. C. S.

The following case occurred to me in the practice of Guy's Lying-in Charity:

E. P———, aged thirty-two, a multipara, and apparently healthy woman, after a natural labour, was ordered the usual after-pain mixture, consisting of spirit of camphor and tincture of hyoscyamus, of each twenty minims, in mucilage, repeated every three or four hours, as might be necessary. About five minutes after taking the first dose she was seized with vertigo, impairment of vision, and almost immediately became insensible. She foamed at the mouth, and there were general twitchings of the muscles, more especially those of expression. No urine or feces were expelled during the fit, which lasted nearly six minutes. On recovering consciousness, she was quite ignorant of what had transpired, did not complain of inconvenience, and convalesced without any unpleasant symptoms. The above circumstances brought to her mind the fact of her having been affected in a somewhat similar manner eleven or twelve years ago, after eating a piece of cam-
phor about the size of a nut, the only difference between the two attacks being the duration of time with reference to the development of symptoms as well as period of recovery—a difference which may probably be explained by considering the form in which the drug was taken.—[Ibid.

On a Simple Mode of Reducing a Dislocated Elbow. By M. Bidard, of Arras.

In a recent communication to the Société de Chirurgie de Paris, M. Bidard relates a case in which a dislocated elbow was reduced in a very simple manner, after the ordinary means had failed. A child, aged 13, had dislocated his elbow, and the dislocation had been reduced in the ordinary way. A month later the elbow was again dislocated. On this occasion the child said nothing about the accident, and five weeks passed before the mischief was discovered, and the attempts at reduction repeated. These attempts failed. It then occurred to Mr. Bidard to persuade the child to swing himself by both hands from a cross beam of wood, and to allow his hands to be held in this position by another person when he became tired. These swingings were continued for fifteen or twenty minutes at a time, and repeated every morning and evening; and the result was that the displacement had entirely disappeared on the seventh day. It appears from the account, that the displacement diminished progressing between the first and ninth suspension; and that the rest of the deformity disappeared suddenly during the fourteenth suspension.

This method, as Mr. Larrey observed afterwards, possesses some analogy to that of the door, as formerly practiced by some surgeons, but with this difference, that the reduction is effected gradually in this case and suddenly in that.

As to the rest we are disposed to think there need have been no difficulty if the chloroform had been employed; for, unquestionably, dislocations of much older standing are easily reducible with the help of this agent.—[Gaz. Hebdom. de Méd. et Chir.—Buffalo Med. Journal.

Idiopathic Dysentery treated by Bismuth and Astringents.

We all know the value of bismuth in the dysentery and diarrhoea of phthisis—in fact, its importance cannot be over-estimated in that particular affection. We have had the opportunity of watching a case of idiopathic dysentery, which is at present in the Royal Free Hospital, under Dr. Brinton's care, of a young man who was admitted, on the 4th of February, with as many as twenty dysenteric motions per diem. Its origin was due to cold,
while working in a gas factory by night; there was no evidence of the existence of putrefying matter in the neighborhood. Under the influence of a mixture consisting of a scruple of bismuth, ten grains of compound powder of kino, two drachms of mucilage, and an ounce of infusion of krameria, every six hours, conjoined afterwards with enemata every night, of twenty minims of tincture of opium, two drachms of tincture of catechu, and two ounces of decoction of starch, the stools gradually diminished to only one daily for the last fortnight; the last three days he had none. At the same time, the most careful attention has been paid to his diet, which consists at this moment (March 16th) of fish. He has been a voracious eater, and is now only kept in hospital for the purpose of regulating his diet. The treatment pursued here proved highly satisfactory, and is well worthy an extended trial in dysenteric complaints. We will not say the good effects were solely due to the bismuth. Of late years, it has been specially recommended, not only in the diarrhoea of phthisis, but also that of enteric or typhoid fever, and the chronic diarrhoea of children.

[London Lancet.]

Nitrate of Potash in Large Doses in Ascites with Anasarca.

We read in the Rev. de Ther. Med. Chir. (Jan. 15th, 1857,) an interesting account, translated from the Chronica de las Hospitalares, of the case of a man who, in eighteen days, was entirely relieved of ascites and anasarca by the use of large doses of the above remedy. On the first day of treatment, which was, as near as we can ascertain, about six weeks from the coming on of the dropsy, and upwards of seven weeks from the beginning of an attack of remittent fever which preceded the dropsy, the new medical attendant, M. Angulo, directed for his patient two drachms of nitrate of potash dissolved in a saccharo-mucilaginous vehicle, which was to be taken in a period of thirty hours. On the first day of treatment there was a slight increase of the urinary secretion; the stomach bore the medicine very well. On the following day the nitre was increased to a little more than three drachms. The patient had some alvine evacuations; the urine was more abundant than on the preceding day. On the third day the patient was much better. At his request the same medicine was given, the doses of which were successively raised until, on the eleventh day of treatment, they had reached eleven drachms and two scruples, or nearly an ounce and a half in twenty-four hours. On the twelfth day the body had resumed its customary size, after an excessive urinary discharge, which had supervened on the fifth, sixth and seventh days.

In proportion as the serous effusion was absorbed, the appetite and strength were resorted, and dating from the seventh day's administration of the nitrate of potash, the patient was able to walk
about his room. At the time he came under the charge of M. Angulo, this man was unable to leave his bed, and so great was the anasarca and swelling of the eyelids that the globe of the eye was no longer visible.

The regimen consisted of preserved fruits, baked apples, panada, vermicelli soup, a little good wine, and at a later period a more abundant alimentation. After the twelfth day the dose of the nitrate of potash was diminished, and on the nineteenth it was abandoned. On the 8th of January, 1856, or seven weeks and two days from the beginning of the nitre treatment, the man was so entirely restored to health, that he resumed his business on the road in trading in wine, which he transported by mules.—Memphis Med. Recorder.

THERAPEUTIC APPLICATIONS OF CHLORATE OF POTASH.

Chlorate of Potash in Mercurial Stomatitis. By Thomas J. Gallaher, M.D., one of the Physicians to the Western Pennsylvania Hospital, Pittsburg.

Mercurial stomatitis is a most loathsome and obstinate complaint. Slight attacks of this affection are comparatively of but little consequence, for, with proper precautions as to exposure, they will mostly disappear in a short time without remedial measures being resorted to. More grave forms, however, in which the gums become very sore, the tongue swollen, the mucous membrane of the mouth ulcerated, the salivary and other glands in the vicinity of the neck enlarged and tender, the breath fetid, the jaws stiffened, deglutition difficult, salivary secretion increased, etc., are of more serious import, and demand the attention of the physician. If a case of this kind be left to itself, or if merely palliatives be employed, it will generally last some weeks, and it may be months before its complete removal by nature is effected.

Many remedies have been suggested and various plans of treatment tried for the removal of this artificial malady; but none, until the chlorate of potash was proposed, met the wants of the profession, and none gave general satisfaction. Recent authors have generally contented themselves with recommending exposure to a warm dry air, cathartic medicines, topical depletion, and the local application of numerous medicines—demulcent, astringent, and stimulating—to the inflamed parts. How uncertain and unsatisfactory these means have been, the profession everywhere can answer. For my part, I may say that I have often been so dissatisfied with the slowness with which mercurial sore throat disappeared under this treatment, that I thought that no good was derived from it further than temporary amelioration of disagreeable symptoms and preservation from external injurious influences.
This treatment is eminently palliative—not specific. Present relief is afforded—while the affection is allowed, in a great measure, to run its own course.

Recently, a new remedy has been proposed which, from a pretty extensive employment of it, I now regard as much a specific for mercurial stomatitis as quinia is for intermittent fever.

Ihr was the first to recommend the use of the chlorate of potash in ulceration of the mouth following salivation, but to Messrs. Herpin and Blache, of Geneva, are we indebted for a more full and satisfactory account of the beneficial effects of this salt in mercurial stomatitis in all its forms and stages. The first account of the discovery of these eminent physicians which appeared in this country, was published, I believe, in the April No. of the American Journal for 1855. Since that time I have had frequent opportunities for employing it, and uniformly with success. I have seen ordinary mercurial stomatitis disappear under its use in a few days, while the most loathsome forms have been observed to yield in ten. Judging from past experience, I now, with the use of this salt, can remove a mercurial disease of the mouth in from six to ten days, which, under any other proposed plan of treatment, would last from four to six week. I may say that I have found it equally beneficial in all stages and degrees of salivation, as well as in ulceration of the mucous membrane of the mouth, which sometimes remains after the other symptoms have disappeared.

My method of treating a patient affected with this disease is as follows: He is placed in a warm and comfortable apartment, and made to live on gruel. I then order him ten grains of the chlorate of potash, dissolved in a tablespoonful of cold water, three or four times a day, according to the severity of the affection. Should there be ulceration of any portion of the mucous membrane of the mouth, I direct a weak solution of the salt to be applied to the denuded part several times a day. Generally, nothing else is required—the cure being accomplished in a few days. To illustrate more fully the effect of this remedy, I have appended a few cases, which have been selected from quite a number that have fallen under my notice.

Case I. The first case in which I had an opportunity of employing this remedy, was in May, 1855, on the person of a young lady, aged 26 years. Blue mass pills had been given her pretty liberally, by the family, for some imagined illness, until her gums and mouth became so sore that it was with difficulty she could swallow food. After suffering some days under these symptoms, I was called to visit her. I found her breath fetid, gums sore, mucous membrane of the mouth partially ulcerated, and other unmistakable evidences of confirmed salivation. For a few days, I gave the usual mouth washes, a gentle cathartic, and required her to remain confined to her room. For about one week she used the means I suggested, with but little advantage. At this time I was made acquainted with the good effects
of chlorate of potash in mercurial stomatitis, and at once determined to put it to the test. I accordingly prescribed it as follows: R.—Potass. chlorat. 3j; aqua 3j.—M. One tablespoonful of this solution to be taken three times a day. I saw the patient two days afterwards, and found her much better. Her mouth had commenced to heal, the mercurial fetor of the breath had diminished, and she felt able to swallow food. In a week from this time the disease was entirely removed.

The speedy relief obtained in this case gave me some confidence in the new remedy, and satisfied me that it was worthy of further trial. An opportunity soon occurred.

Case II. Miss C—, aged 23 years, while employed in the capacity of a dry nurse, was attacked in the spring of 1856, with severe neuralgia of the right side of the head and upper part of the face. The physician to the family in which she for the present resided, was called to see her, who pronounced it disease of the brain. Powders containing calomel were ordered. She took the medicine a few days, but her mouth becoming very sore, and her sufferings not being alleviated but rather increased, her friends determined to take her home and send for their family physician. I found the patient labouring under remittent hemicrania of most excruciating severity, accompanied with mercurial salivation. The severity of the symptoms required active medication, I ordered at once remedies both for the neuralgia and sore mouth. A liniment composed of chloroform and olive oil, was ordered to be applied to the head and temples, and ten grains of the sulph. of quinia to be given night and morning, for the former, while ten grains of the chlorate of potash, three times a day, was prescribed for the latter affection. In three days the hemicranial pain had subsided, when the quinia was suspended. The sore mouth had, in the mean time, improved. Four days' more employment of the chlorate stopped the saliary discharge, and healed up the mouth. The cure was prompt and decisive.

Case III. In January, 1857, I was called to visit a Mrs. M—, who complained of a bad breath, sore mouth, loss of appetite, &c. I learnt that, about one week previous to my visit, she had taken some anti-bilious pills, which were supposed to contain mercury. An examination of the mouth told at once the cause of her sufferings. She was severely salivated. Nothing had been done, further that a Dover's powder had been taken at bedtime, to work the cold off, as she expressed it, and an alum wash for the mouth had been used freely. It may not be improper to state that no advantage was derived from these. The patient was directed to remain in her room, live on spoon diet, and take the chlorate in ten grain doses, three times a day. On my visit the following day, she was much better, and declared the first dose helped her. A continuance in the remedy effected a perfect cure in a few days.

Case IV. This was a case of ulceration of the mouth following salivation. It was of nearly three weeks' continuance, and many local applications, including nitrate of silver, had been ineffectually made to it. I gave the chlorate in the usual form and frequency, and ordered the ulcer—which was situated beneath the tongue, of large size and very painful—to be washed several times a day with a weak solution of the same, and had the satisfaction of seeing it heal up in five days.—[Am. Jour. Med. Sciences.]
Chlorate of Potash Injections in Leucorrhœa and Ulceration of the Os Uteri. By Bedford Brown, M. D., Caswell County, N. C.

Knowing the peculiar and happy curative influence exerted by chlorate of potash in external ulcerations attended with vitiated discharges, and having been so often disappointed by the usual modes of treating such cases, the great difficulty of which all medical men acknowledge, I determined to experiment with injections of a solution of that salt in ulceration of the os uteri and cervical canal attended with leucorrhœa.

The discovery of some simple and efficient means as a substitute for the uncertain astringent injections in common use, and the tedious and often unsuccessful caustic and speculum, would relieve the physician of an extremely disagreeable duty, and the patient of an almost intolerable necessity.

In those cases of leucorrhœa attended with ulceration of the os uteri or cervical canal, and enlargement of the muciparous glands of the vagina, or simple ulceration without leucorrhœa, I believe the injections of the chlorate far more certain and efficient than the ordinary astringent injections, or the local application of caustic. In these cases I have not thought proper to give detailed reports of their symptoms and progress.

Case I. A colored woman, aged 30, who had never borne children, and had, from early life, complained of symptoms of uterine disease. At the time she came under my charge, she had profuse leucorrhœa. On examination with the speculum, the entire vaginal canal was seen highly inflamed—the os uteri very tumid, with numerous large ulcers. This woman used, by injection, a solution of the chlorate, in the proportion of 5j of the salt, dissolved in 5xvij of rain water. As much of this as an ordinary female syringe contains was used twice daily. Under the influence the ulceration and inflammation, with the attendant leucorrhœa, diminished rapidly, and in two weeks all indications of disease had disappeared. In this case, the locality of the disease was confined to the vagina and the os uteri.

Case II. To digress from the subject, I would report the present case as illustrating the equal powers of the chlorate of potash in gonorrhœa of the female. This patient an unmarried female had suffered from gonorrhœal disease, until the vaginal inflammation had become excessive with very copious, purulent, and exhausting discharges, accompanied by so much tenderness and pain as entirely to preclude the use of the speculum. The difficulty and pain of urination were such as to compel me to use the catheter frequently. The same treatment as in the previous case was adopted, and with equal success. In fact, this patient (servant) who had been perfectly disabled, in ten days after using the chlorate injections, was attending to her ordinary duties.

I strongly conjecture that gonorrhœa of the male would be equally amenable to the same treatment; and, as soon as the first opportunity presents, I design testing it. If so, a new era will be introduced in the management of that intractable disease.
Case III. This was an example of leucorrhoea originating from ulceration of the os uteri and inflammation of the cervical canal. The woman was married, and had been confined prematurely three months previous. She used the chlorate of potash injections, and remained in the recumbent position for some hours after each injection. She found equal benefit from the remedy, and is now attending to her customary duties, without any of her former symptoms.

Case IV. and V. In these cases there was ulceration of the os uteri and cervix, with very slight leucorrhoea, though suffering from the ordinary annoying symptoms of uterine affection. In both cases, the chlorate in solution healed the ulcerations in between two and three weeks, with signal relief to the patient.

To sum up briefly, those conditions to which the chlorate of potash injections are applicable, I would say those cases are appropriate, wherein ulceration and inflammation are confined to the os uteri and cervical canal and vagina, either with or without leucorrhoea.—[lb.

EDITORIAL AND MISCELLANEOUS.

Dr. Marshall Hall's Reply to our Letter.—Through the kind attention of Messrs. T. K. & P. G. Collins, of Philadelphia, and of Professor A. Stillé, who courteously placed at their disposal his May number for our use, we are enabled, at last, to lay before our readers, all which has appeared in the London edition of the Lancet, in relation to our claim.

It will be recollected, that Dr. Marshall Hall's article, making the announcement of an excito-secretory system of nerves, first met our eye early last March, our letter was forwarded to him, we think, about the 20th of that month; his reply, it will be seen, is dated "April," and the essential parts of our letter are found in the pages of the May number. We certainly have no reason to complain of any want of promptness, either on the part of Dr. Marshall Hall, or the London Lancet. It will be seen that the Editor excuses himself, for not complying fully with Dr. Hall's request, "to let our paper appear in the Lancet," on the ground, that our letter is too long, and contains "needless repetitions." The paper is certainly lengthy and contains repetitions, but it must be conceded, that under the circumstances, they cannot be considered needless. It was necessary to present to Dr. Marshall Hall in England, the various proofs we had, that we were the first propounder of an important doctrine in physiology; these proofs were scattered through a number of American publications, which, from his announcement of the doctrine as his own, we had the best reason to believe were not accessible to him—a mere reference to the works would not have been sufficient, the articles, themselves, had to be presented seri-
atim with the dates and circumstances of their original bringing forth. As our protest, against the claim of M. Claude Bernard, was but a reiteration of what had been presented in the original paper, of course, when we presented this in regular order to Dr. Hall, after the paper on Dentition, it constituted a repetition, but certainly not a needless one. We think this repetition only served to pile proof upon proof, and as, in a legal instrument, the advocate never sacrifices definiteness and clearness to elegance, we, having but one object in view, viz., producing conviction in the mind of Dr. Hall and other readers, that our announcements were prior to his, used repetition, and even tautology, whenever we thought it would add force to our argument. This result has been obtained, our claim has been fully yielded, and we do not complain if the Editor of the Lancet does differ with us as to the mere rhetoric used in the presentation of our proofs. We thank him for the large space he has given to our paper, and the entire fairness with which he has presented our arguments. We certainly would have preferred that the courtesy and spirit of kindness, which we endeavored to breathe through our letter to Dr. Hall, had been allowed to meet the eye of his European readers, but his valuable weekly journal, we presume, could not afford so much space.

Dr. Hall's admission of our claim is, as he properly terms it, an "adjudication," for, in yielding to us the merit of priority in the announcement and naming, he could not ignore the claims of M. Claude Bernard, as one who had subsequently proved our doctrine by experimental demonstration.

As the relative value of observation and experiment has been fully discussed and illustrated, in our subsequent paper to the American Med. Association, (Prize Essay,) we make no further reference to his award to M. Bernard, in this place. The substance of our claim, viz., that the theory of an excitatory-secretory action was a deduction of our own, has been promptly, courteously, and fully yielded by Dr. Marshall Hall, and henceforth we are satisfied with his acknowledgement. The generalization of the doctrine, and the extended application of the principle throughout the organism, we cheerfully yield to Dr. Marshall Hall; although in our assertion of the excitatory-secretory action in 1850 and '53, we by no means restricted it to pathology and dentition, but said, "that there existed between the cerebro-spinal and the ganglionic system of nerves, a relation similar to that between the sensitive and motor branches of the cerebro-spinal, &c."

Occupying the exalted position in the field of Reflex Action, Dr. Marshall Hall does, he can well afford to yield any just claim to those who have come after him, to work out the detail of his grand induction. When he decides between M. Claude Bernard and his humble American correspondent, when he smiles approvingly upon the labors of Dr. Tyler Smith, and many other physiologists and pathologists, in their application of the reflex doctrine to physiology and pathology, he is really but the Parent-arbiter.
dispensing even justice among his own children, and encouraging them to cultivate and enrich a domain which he, himself, has deeded to them and to the world. Happy has he been to live to see such noble results from an induction entirely his own!—Long may he yet live to open new fields, and incite others to higher attainments; each one of which will only add a new chaplet to his own resplendent brow.

THE EXCITO-SECRETORY SYSTEM;

Claims of Henry Fraser Campbell, M.D., of Augusta, Georgia, U. S.

By Marshall Hall, M.D., F.R.S., of the Institute of France, etc., etc.

To the Editor of the Lancet:

Sir,—I have received a printed letter, addressed to me by Dr. Campbell, of Augusta, Georgia, U. S., stating his claims to priority in the detection of the excito-secretory sub-system of the spinal system, and requesting me to use my influence to obtain its insertion in The Lancet. May I therefore beg that it may, if possible, appear in that publication?*

"A Claim of Priority in the Discovery of, and also the naming of Excito-Secretory System of Nerves. By Henry Fraser Campbell, M.D., of Augusta, Ga., U.S.A., Member of the American Medical Association, Professor of Comparative Anatomy, &c., in the Medical College of Georgia, and Senior Editor of the Southern Medical and Surgical Journal.

"EXCITO-SECRETORY SYSTEM OF NERVES.

"LETTER TO DR. MARSHALL HALL, OF LONDON.


"My dear Sir.—In the number of the London Lancet, republished in this country, for March, 1857, I have just read a paper from your distinguished pen; and in this paper you announce a system of Excito-Secretory nerves, in the following connexion and in the following terms:

"In a memoir read at the Royal Society in February, 1837, I announced the existence of an excito-motory system of nerves.

"I believe I may now announce a system or sub-system of excito-secretory nerves, not less extensive.'

"As the above announcement is here made in close relation with a discovery long admitted to be your own—viz., that of the excito-motory system of nerves, and inasmuch as in your subsequent remarks you attribute the proposition to no one else, I am left to infer that it is deemed by you an original deduction from the admitted facts of anatomical and physiological science, as developed by observations and experiments during the last and the present century. Some of these last—viz., the experiments of M. Claude Bernard, of Paris—you adduce, with the apparent intention of fortifying the views you here express.

"Finding in none of your communications upon this interesting topic, any mention made of my name or of my records, I am, with regret, im-

* Dr. Campbell's letter consists of sixteen dense octavo pages, is very diffuse, and contains needless repetitions, as the whole of p. 7—9, and p. 11—13. We have therefore inserted it in a form suited to our space. We have omitted no important paragraph.—[Ed. L.]
pelled, from considerations of courtesy to you, and of justice to myself, to call your attention to the registration of my own labours in the same important field. I will, however, direct you particularly, though briefly, to several portions of your own communication, in order that they may be placed in convenient juxtaposition with my own records, without giving the trouble of each time referring to the pages of The Lancet:

"But the most remarkable proof of the doctrine which I am endeavoring to unfold is furnished by the brilliant discovery and skilful experiments of M. Cl. Bernard"—

"And you here refer to his well-known experiments on the pneumogastic nerve in its relation to the secretions of the liver, published in his Lectures on Experimental Physiology during the winter session of 1854 and 1855."

"In the earlier part of your communication [March, 1857.] you thus announce the addition of this, as you suppose, new sub-system, to what you term the 'Diastaltic Nervous System,' the term 'henceforth' apparently being used to date the initial moment of an era:

"'Henceforth the diastaltic nervous system must be divided into two sub-systems.

I. The Excito-motory.
II. The Excito-secretory.

"The former is extended to the entire muscular system; the latter is diffused over the general system as the blood is diffused over the system.'

"Again, in reference to the pathological relations of the excito-secretory system, you remark,—

"'The pathology of the excito-secretory sub-system remains to be investigated and traced. A partial keen current of air falling on any portion of the skin may induce inflammation in any susceptible internal organ. An extensive burn or scald is apt to produce pneumonia."

"And as my last quotation for the present:

"'But here I close this brief communication. My present object is only to draw the merest sketch of this vast subject, which demands a most extensive and cautious series of experiments and observations. The efforts of many labourers, through many years, will be required fully to develop the two sub-systems of the diastaltic nervous system.

"'I propose shortly to treat this important subject at greater length, and with more details.'

"Now, my dear Sir, by a reference to the following series of records, running through a period of nearly seven years, you will at once perceive that the excito-secretory function of the nervous system has been the subject of earnest and diligent inquiry, and also of plain record, with me, for a length of time far anterior to that at which either yourself or M. Bernard had published anything on the subject.

"You will herein also perceive that this system of nerves has been plainly recognised and set forth, as considered in its relations to pathology, through which, indeed, its physiology has been mainly deduced by me. And lastly, that this system of nerves, before plainly stated and amply discussed, was, as early as May 5th, 1853, in the presence of the American Medical Association, the highest tribunal in the medical sciences within my reach, publicly named by me, the Excito-Secretory, and that too, in
juxtaposition with, and contradistinction to, your own discovery—viz., the Excito-Motory function." (pp. 1—3.)

"June, 1850.—Permit me now, respected Sir, to refer you to the pages of the Southern Medical and Surgical Journal (new series), vol. vi. No. 6, June, 1850. Part I.—Original Communications. Article XV., page 321. You will in this place find the paper just cited, published—viz., 'An Essay on the Influence of Dentition in producing Disease. By Henry F. Campbell, M.D., Demonstrator of Anatomy in the Medical College of Georgia.' Here you will find that I have in the beginning sketched prominently the two orders of phenomena which occur during the period of dentition,—viz., the convulsive and the secretory, explaining the first easily enough by a reference to the principles of excito-motory action laid down by yourself; whilst the other set of phenomena I presented in such a manner as that, from them, the excito-secretory function of the nervous system became an obvious and an unavoidable deduction: by this means mutually establishing a physiological principle before scarcely ever broached or hinted at; and, in the second place, leaving no chance to escape the necessary admission that this set of phenomena, before perfectly inexplicable to the profession, could only be rationally interpreted by the admission of that very physiological principle. In doing this, the 'two sub-systems,' as you now term them, were, throughout, kept in close relation, but in decided contrast, the one being used occasionally, it is true, to illustrate the other, but never for a moment becoming confounded with the other: thus—'Now let us inquire how far these phenomena are dependent upon dentition; and analogy with the excito-motory system will much assist us in our argument. We have seen that local irritation can, through this system, produce convulsions by the reflex function of the nerves, the sensitive branches of the fifth pair becoming excitor to the motory-spinal nerves; and so, may we justly infer, do these same branches, under certain circumstances, become excitor to the secretory filaments of the sympathetic, distributed so abundantly to the intestinal canal, by a transmission of this irritation through the various ganglia with which it is connected.'"

"Without further remark at present, I will lay before you that portion of this Essay which embodies my first record upon the excito-secretory function of the nervous system:

"From the above considerations we are induced to conclude that the convulsions are often produced by the irritation of dentition, and can be directly referred to this as the sole cause.

"We arrive now at a point in this somewhat obscure and much disputed question which, perhaps, affords more ground for doubt than any of the foregoing—viz., a consideration of the pathogenic influence of dentition in the cholera infantum, or diarrhoea, so uniformly co-existent with this process. Unlike the convulsions, the analogy between which and certain known and established phenomena of the excito-motory system, which it is only necessary to refer to, and their operation is plain and intelligible, this new set of symptoms, if we refer them to the process of dentition, requires us to look yet deeper into the mysteries of our nervous organization, and to venture still one step further on the terra incerta of sympathetic interpretation.

"In order to apply our arguments, let us hastily review the foregoing investigation, that they may bear more fully upon this part of our question; and, firstly, we have seen that inflammation, pain, and irritation are pro-
duced locally by the process of dentition, evinced by restlessness, biting, etc. Secondly, we have seen that this local irritation can be transmitted by excito-motory influence to other and distant parts of the body, manifested by convulsions. We have also endeavoured to corroborate this latter opinion by a reference to the order of succession in the nerves in which this irritation occurs, and also by a comparison of these phenomena with other well-understood and established analogous phenomena. Herefore we have had to deal entirely with functions of the cerebro (?) spinal system of nerves; but to account for this second and more obscure part of our problem, we must look in vain to any direct anatomical connexion between the fifth pair and the rest of this system of nerves. We are forced to seek out other connexions, indeed somewhat more intricate and indirect, but fortunately no less legitimate and definable. We have now to consider a set of organs which, unlike the voluntary muscles, have no connexion, or rather, we would say, emphatically, they have a connexion, though indirectly, with the cerebro-spinal system. We mean the abdominal viscera, which we know are almost altogether supplied from the great sympathetic system of nerves. Now, in the prosecution of our inquiry it becomes necessary, to the elucidation of the question, to trace out the same connexion between the fifth pair and the sympathetic or secretory, as we did between the fifth pair and the cerebro-spinal and motory nerves; and then, should we succeed, we will briefly inquire into the bearing which this connexion and its possible results may have upon our question.'

"At the fifth annual meeting of the American Medical Association, (1852) held in Richmond, Virginia, not being present myself, I was appointed by a special committee, to prepare an essay on the subject of 'Typhoid Fever,' which essay was read before that body in New York, in May, 1853. In this paper, I took occasion to consider carefully the ganglionic system, in the support of the position therein assumed, that all typhoidal fevers were manifestations of disease through the secretory system of nerves. While thus engaged, my attention was called to certain experiments performed by Mons. Claude Bernard, of Paris, and made public through the Gazette Médicale, and translated in the New Orleans Medical Register, together with his deductions therefrom.

"On examination, finding that they contained what at that time appeared to me the germ of a theory similar to mine, recorded in June, 1850, though he refers to them as 'a set of phenomena identical with those occurring in the cerebro-spinal system of nerves, denominated excito-motory by Dr. Marshall Hall,' while I had deduced this excito-secretory system (in 1850), saying 'analogous with, the excito-motory system will much assist us in our argument;' and further, inasmuch as this distinguished gentleman's report presented itself to my mind at that time, somewhat in the form of an announcement, I deemed it advisable to appeal to our National Medical Congress, in the following brief memoir, praying permission to record before them, my claim to priority, and also my protest against the palm of originality attaching to Mons. Claude Bernard:

* After all, it appears that we did not quote quite enough to be understood, hence this interrogation point. Our article on Dentition, from which this is quoted, was a review of all the troubles of dentition. In the earlier part, we had been speaking of the convulsive diseases which were excito-motory phenomena, and just at this point we were beginning to consider the secretory phenomena, and thus we say; 'hertofore we have," etc.—[Ed. S. M. & S. Jones.
"Abstract from the Transactions of the American Medical Association: Meeting held in the City of New York, May 3rd, 1853."

"Dr. Campbell, of Georgia, submitted a paper on a question of priority in reference to the discovery of the reflex relations subsisting between the cerebro-spinal and sympathetic system of nerves.—See Minutes of the Sixth Annual Meeting, vol. vi., p. 89."—(pp. 9, 10.)

"In conclusion, let us define the position which, at the end of our investigation, we feel warranted in assuming. It is the following:—That in the anatomy and physiology, as well as in the dependent analogies of the process of dentition, we find ample ground for the opinion that the diseases pertaining to this period may be dependent, and, in many instances, are entirely so, upon the local irritation attending the process, being transmitted through the cerebro-spinal system of nerves, producing convulsive diseases in the motor apparatus, or through the sympathetic, causing derangement of the secretory organs, particularly of the alimentary canal, by the sway which it exercises over the arterial system from which these secretions are eliminated."

"In the above brief quotation, it will be observed that the doctrine of the reflex function between the cerebro spinal and sympathetic systems is plainly enunciated, and not only is the physiological fact noted, but we there also have surmised the transmission of permanent irritation, or of paralysis from the cerebro-spinal to the sympathetic system, giving rise to various aberrations in nutrition and secretion. This opinion we have held for years, teaching to our classes that there existed between the cerebro-spinal and the ganglionic system of nerves, a relation similar to that between the sensitive and motor branches of the cerebro spinal, and which Marshall Hall terms excito-motory; while we have termed that between the cerebro-spinal and sympathetic systems excito-secretory."—(p. 13.)

"And now, my dear Sir, I will close this already too prolonged communication: as courtesy to you, and justice to myself, were professedly the instigating causes of its indictment, I do most sincerely hope, that in the too earnest establishment of the latter, I have not at any moment even appeared to have forgotten the former.

I am, Sir, with feelings of great respect,

Your obedient servant,

Henry F. Campbell."

"To Marshall Hall, M.D., F.R.S., &c."

It would be unjust to deny that Dr. Campbell has the merit of having first called attention to the excito-secretory sub-system in the year 1850, and that he imposed this very designation in 1853.

So far, Dr. Campbell's claims are undeniable, and I would say "palmam qui meruit ferat."

But Dr. Campbell's observations will be seen to be limited to pathology, and indeed to dentition, and are the results of mere observation, with an occasional glance at physiology; no physiological instance of the latter being adduced distinctly or emphatically.

Now M. Claude Bernard's labours are experimental, and of the most recondite character:

"If the pneumogastric nerves be divided in the neck, the formation of sugar in the liver is arrested; if the lower portion of these divided nerves
be galvanized, no effect is produced; but if their upper portion be galvanized, the formation of sugar is restored!"

The fact that a profound interior physiological secretion is one of reflex action is demonstrated!

Other physiological instances are freely adduced.

I arrive at this conclusion: the idea and the designation of the excitosecretory action belong to Dr. Campbell, but his details are limited to pathology and observation. The elaborate experimental demonstration of reflex excitosecretory action is the result of the experimental labours of M. Claude Bernard. And now I say—"sumum cuique."

My own claim is of a very different character, and I renounce every other. It consists in the vast generalization of excitosecretory action throughout the system.

"There is, perhaps, not a point in the general cutaneous surface in which tetanus—an excitomotor effect—may not originate; there is scarcely a point in which internal inflammation—an excitosecretory effect—may not be excited."

Every point of the animal economy is in solidarité by a reflex excitosecretory action with every other!

I here observe that this excitosecretory action cannot be designated diastaltic. It is certainly dia-energetic; but it does not assume the form expressed by the Greek term, σηκλαν. A new designation is required, and I propose at once the plain and simple one of dia-centric. Thus the in-going nerves are centripetal; their influence traverses the spinal marrow, and is dia-centric; it is reflected along centrifugal nerves.

One remark more. The diastaltic system extends to the internal muscular organs, as well as the external. I would therefore speak of

1. External diastaltic action, and of
2. Internal diastaltic action.

The former has been amply elaborated and traced in my various publications; the latter remains for new investigation.

The former applies to all orifices and exits, and all tubular structures leading to them; the latter to all internal muscular organs—the heart, the stomach, the intestines, &c.

I trust Dr. Campbell will be satisfied with my adjudication. There is in the excitosecretory function, as applied to pathology, an ample field of inquiry for his life’s career, and it is indisputably—his own. He first detected it, gave it its designation, and saw its vast importance.

I am, Sir, your obedient servant,

April, 1857.  

M ARSHALL HALL.

The American Journal of Medical Sciences.

We refer our readers to the July number of this valuable quarterly, for a clear, concise, and able presentation of the entire discussion lately subsisting, in relation to the Excitosecretory system, over the well-known initials D.F.I. This journal has ever proved itself a zealous defender of American claims in matters of science, and yet with that catholic spirit which breathes through all its pages, it deals even-handed justice to all. Its able Editor, the Nestor of American Medical Periodical Literature, allows nothing to escape which can add one valuable grain to the garner of
science, and long experience has given him and his able collaborators an amount of discrimination which renders them almost infallible. In making up the chain of evidence for our "letter," it was to the pages of this journal that we turned for editorial records, which served as a bulwark of defence in its establishment. These were signatured "D.F.C." We thank Dr. Condie for the care he has taken to present our claim in so fair and pertinent a manner. We thank him too, that, in all his remarks, he has evinced such a spirit of courtesy, kindness, and confidence towards Dr. Hall, so entirely in keeping with our own feelings.


We have received from the publishers, Messrs. Lindsay & Blakiston, and Messrs. Blanchard & Lea, through Messrs. Richards & Son, Booksellers in this city, the above valuable American reprints, from the English edition. Time and space will not allow us now more than to acknowledge the receipt of them; but we most cordially commend these three books, by our favorite authors, to our readers. We commend them, not blindly nor hastily, but upon the most careful reading. We have read them—studied them page by page and line by line. Our copies, of the lectures, are all noted in pencil on the margins, and the fly leaves indexed for future reference on special subjects. No man can safely write on Pathology unless he understands Physiology well. No man can give safe instruction in Therapeutics unless he has thoroughly investigated Pathology, "the Physiology of Disease." Dr. Todd's Physiology is of the most recondite and reliable character; an earnest and honest investigator for many years, experiment and observation have been the basis of every doctrine he promulges, and every precept he offers; no one will rise from reading his clinical lectures without feeling that "now my opinion is worth more than it ever was before." We know of no more improving course for a practitioner, old or young, than to read these three works, beginning with the Physiology and ending with the work on Dropsy and Urinary Diseases.

This is a valuable little pocket manual of medicines and their doses, modes of preparation, action, etc. Its author has done good service in an elementary way to American science. His two other works, "The Microscopist," and "The Curiosities of the Microscope," are the best of their kind, and we see by the North American Medico-Chirurgical Review, June number, that one of them is highly appreciated in England, (thoroughly plagiarized.) The present work we recommend, especially to young practitioners. There is much labor in getting up such a work, and the reward is mostly in the patronage it gains. We hope the profession will let it have its reward.


This is an excellent work on the subjects indicated on title page, prepared with great labor, research, and ability, by our confrere of the Southern Journal of the Medical and Physical Sciences. It is accompanied by a very complete geological map of the State of Tennessee, by James M. Safford, A.M., State Geologist. The work of Dr. Currey is well calculated to excite an interest in the development of the mineral resources of his State, and her citizens owe him much for his labors. Similar scientific investigations in our own State of Georgia would enhance the value of our lands, and develop our mineral resources, more than a hundred fold. We thank the author for our copy of his valuable work.

Dr. J. S. Coleman, of Augusta.—We are pleased to see the name of our young friend among those who are spoken of in terms of high commendation, in reference to the late resignations at Blockley Hospital. We are not perhaps sufficiently posted as to all the merits of the case between Dr. —— and the Faculty, but it ever speaks well for a young member, to see him acting in concert with the body of the Profession in all questions of Medical Ethics. It is a safe course, because most apt to be right, and we congratulate our promising young friend in having adopted it, at whatever hazard or sacrifice. It was wise to act on the responsibility of the conservative body of the Profession, they discountenanced the new appointee on ethical grounds, and for the sake of right, the younger gentlemen did well to act with them.
Traumatic Tetanus.—In a review of a clinical lecture on Traumatic Tetanus, recently delivered at Jackson Street Hospital, Prof. D. F. Wright, of Memphis, Tennessee, thus embodies our views, and reports a highly corroborative case, which occurred in his own practice:

"The first of the two works is a lecture before the Medical Students of his College upon the pathology of traumatic tetanus. His explanation of its phenomena is grounded upon the doctrines of reflex nervous action as now established in nervous physiology. Assuming that the ganglia of the spinal column are chiefly concerned in those motions which have become habitual, and are performed with but little attention or mental cognizance, and that the brain exercises but little influence over them, except when any unusual circumstances so affect the occasions which call them forth as to demand the corrective and controlling influence of the ganglia of the cerebral hemispheres, he suggests that the phenomena of tetanus are occasioned by these cerebral ganglia losing the power of controlling these ordinarily automatic motions; the peripheral irritant having produced a morbid excitement in the inferior centres which at once places them beyond the control of the superior ganglia, and produces in excess the motions which it is the function of the various spinal ganglia to effect. In other words, (to use an elegant illustration of our author,) the spinal column rebels against the brain, and in its agitation dethrones its proper sovereign, and then in the tumultuous and spasmodic motions which ensue, manifests its own abnormal condition of excitement.

"We could wish that ...... Dr. Campbell had discussed the relations of tetanus and hydrophobia, especially with reference to the existence of a specific virus in the latter disease, a question in relation to which we have long entertained serious doubts. Giving, as we do, a free assent to his rational explanation of the phenomena of tetanus, we can neither see any point in which this explanation fails to apply to hydrophobia, nor do we know of any symptom attending the one which is not also incidental to the other. Both seem to arise from an irritant applied to some portion of a nerve trunk, both to be attended with the production of those automatic motions which are ordinarily attributed to excitement of the spinal ganglia, and in both the customary controlling influence of the cerebral centres seems to be suspended. We have seen even the peculiar spasms of the muscles concerned in deglutition, from which hydrophobia has derived its name, excited in traumatic tetanus exactly as is described in hydrophobia, (of which we have never seen a case) as may be illustrated by the following case:

"In the summer of 1855, we were called upon to visit an Irish boy, aged about 12, who was suffering as follows: He had, about four or five days before, received a lacerated wound by stepping, barefoot, on a rusty nail—this was situated in front of and a little below the internal malleolus; in short, immediately upon the track of the posterior tibial nerve. When we first saw him, the wound was inflamed and ulcerated, presenting a jagged and excavated centre, with periphery of inflamed surface, of dark, livid, red colour. The lower extremities were occasionally convulsed with a slight jerking movement, the extensor muscles seeming to be principally concerned. No affection of the upper extremities, or of the maxillary muscles, except that slight trismus was occasionally observed. The con-
vulsions of the lower extremities seemed to be rythmically repeated at the rate of about four times in the minute, but were hastened and intensified by the sudden contact of any substance, especially cold water. So much was this the case that, although we at first ordered water dressings to the wound, we found it necessary to replace them by a poultice of slippery elm. This, with a saline cathartic, was followed by full doses of morphine as soon as the bowels had been well evacuated. The morphine for a while seemed to control the nervous symptoms, but the morning of the second day they were suddenly aggravated to an alarming extent. Their repetitions first became much more rapid, and shortly were replaced by a continued spasm, which affected all the muscles of the lower extremities, as well as those of the back and abdomen, but especially the former, the position of the patient being that of opisthotonos. Excitability from external contact was much increased, so much so that even the contact of clothing was the source of intense irritation, and we assented to the mother's proposal, as the weather was intensely hot, of divesting him entirely of clothing, and from this time until his death, he continued entirely intolerant of any covering, except, for a few minutes, that of a light sheet. We now (about 8 A.M., of our second day's attendance,) had recourse to the influence of chloroform. We at first ordered m. xv., to be administered internally every quarter of an hour, and the pillow, etc., around his head, to be occasionally sprinkled with ether, and staid to watch the effect of our prescription. Very considerable reduction of all the symptoms followed the second dose, and then ordering it to be repeated, in doses of m. xx., every half hour, we left him, and made our next visit at 12 M. We then found that all the symptoms had returned, the irritability being even aggravated—the slightest touch producing the most violent convulsions. We determined now, as a dernier resort, to put him completely under the influence of chloroform as might be found possible, and without limiting the quantity used, kept him inhaling it till, to the astonishment of all his friends, (ourselves included) he sank into a tranquil sleep, every muscle previously strained to a degree which threatened spontaneous rupture, being now relaxed and flexible. Having indispensable avocations in another part of the city, we now gave instructions, that if on awaking the patient should exhibit any convulsive symptoms, the chloroform should be administered in the same manner. We relinquished our attendance till 5 P.M. On our arrival we found everything changed for the worse; the opisthotonos was so great that, as he refused to lie any other way but face upwards, a pile of pillows had to be placed beneath his back; not only contacts, but the approach of a person to the bed excited the most violent spasms, accompanied with intense suffering, the jaws were now firmly clenched, and the muscular contraction of the features gave the countenance a singularly weird appearance. Nevertheless, the mind seemed untouched. On inquiry we found that he had waked about half an hour after we left him, that convulsions, at first slight, had commenced almost immediately; that, contrary to our instructions chloroform had not been administered, the people having a sort of half superstitious dread of the drug, but that when things had got to their worst, the attempts had been made to administer some by the mouth, which the patient was unable to swallow. We had now very slight hopes of the case, but determined that if anything could be done it would be with chloroform. The father of the boy told us it could not be administered, and he was right this time. A teaspoonful being held to the lips, such
spasms were excited in the throat and fauces that instant suffocation was apprehended, even the sound of pouring the medicine into the glass excited these spasms, which were accompanied by a rattle in the throat, and the forcing of some frothy mucus through the clenched teeth. Attempts at administering the drug by inhalation were equally unsuccessful, and we had to leave our patient to the inevitable termination of his calamity which occurred about 8 P.M.

Our object in stating this case was twofold. First, to supply Dr. Campbell with an instance confirming the benefits of chloroform in this affection, the recommendation of this agent being one of the purposes of his lecture, and secondly, to show the great similarity of some of the symptoms to those of "Hydrophobia," had the wound been given by a dog's tooth instead of a rusty nail, the cry of mad-dog would have been raised, and a regular dog killing organized on the spot, and if hydrophobia be a disease distinct from tetanus, who could blame the proceedings? It is our own belief, however, that there is nothing peculiar in the bite of a dog as the exciting cause of these symptoms, nothing specific, nothing more efficient than a lacerated wound from any other cause. To return to the subject of the chloroform, we think no physician will read this statement without coming to the conclusion, that if the chloroform had been administered, during our absence, according to our directions, the life of the patient, already prolonged by its agency, might have been saved altogether."

We think, with the reporter, that had his directions been fully carried out, perhaps, the life of the patient would have been saved. In our opinion, a primary object in the treatment of an acute attack of tetanus is, not so much to cure the disease immediately, (this we cannot often expect,) but by the obtunding influence of remedies, addressed to the nervous system, of which chloroform is the principal one, so far to keep the devastating effects of the disease in abeyance, as to allow the case to become what is usually termed chronic tetanus. It is the general opinion, that where the patient survives the tenth day, his chances of ultimate recovery are greatly increased. This object of supporting the patient through the acute stage has not, it appears to us, been sufficiently kept in view by most writers on this fearful disease, the idea most prominent ever seems to be, that this is a disease which must terminate fatally very shortly, if not speedily cured, and consequently, the most active, and oftentimes the most exhausting remedies, are successively and rapidly crowded upon the patient, which, as they do not abate the violence of the paroxysms, only hasten the fatal issue. Beyond gentle purgation in the beginning of the attack, with a free evacuation of the bowels once in two or three days after, we are opposed to any measure which savors of a depleting course. Bleeding, while it depresses the vascular system and exhausts the strength of the patient, according to our observation, exalts the irritability of the nervous system, and thus favors the frequency of the paroxysms. We cannot conceive of a case in which it would be indicated as a remedy for tetanus.
Ohio State Medical Society.—The twelfth annual session of the Ohio State Medical Society was held on the 2nd, 3rd, 4th and 5th of June, at Sandusky. The number of delegates in attendance was 130. Dr. Isaac J. Hays, of Philadelphia, and Dr. J. C. Blackburn, of Kentucky, who were present, were elected honorary members of the Society. Dr. D. Tilden was chosen President. Many interesting reports were presented, and were referred to the Committee on Publication. Dr. Holston related a case of death which he thought could be traced to the action of veratrum, and expressed his doubts of the safety of using this article as a remedial agent. The only effect produced by it in his practice was the reduction of the pulse. Dr. Harmon had found it beneficial; but Dr. Brennan considered a general prostration the only result.—[Boston Med. and Surg. Jour.]

Spiritualism in Boston—Conclusions of the Harvard College Faculty.—Professors Agassiz, Pierce, and Horsford, of Harvard College, and Dr. Gould, (says the South Carolinian,) the committee selected to pass upon the controversy between the Boston Courier and Dr. H. F. Gardner, respecting the alleged phenomena of spiritualism, after a week’s investigation, made the following report:

“"The committee award that Dr. Gardner having failed to produce before them an agent or medium who 'communicated a word imparted to the spirits in an adjoining room,' who read a word in English written inside a book, or folded sheet of paper,' who answered any question 'which the superior intelligence must be able to answer,' who 'tilted a piano without touching it, or caused a chair to move a foot;' and having failed to exhibit to the committee any phenomenon, which, under the widest latitude of interpretation, could be regarded as equivalent to either of these proposed tests; or any phenomenon which required for its production, or in any manner indicated a force which could technically be denominated spiritual, or which was hitherto unknown to science, or a phenomenon of which the cause was not palpable to the committee, is, therefore, not entitled to claim from the Boston Courier the proposed premium of five hundred dollars.

"It is the opinion of the committee, derived from observation, that any connection with Spiritualistic Circles, so called, corrupts the morals and degrades the intellect. They, therefore, deem it their solemn duty to warn the community against this contaminating influence, which surely tends to lessen the truth of man, and the purity of woman.

"The committee will publish a report of their proceedings, together with the results of additional investigations, and other evidence independent of the special case submitted to them, but bearing upon the subject of this stupendous delusion."

Benjamin Pierce, Chairman.
Is. Agassiz,
B. A. Gould, Jr.
E. N. Horsford.

Cambridge, June 22, 1857.