Caffeine as an Antidote in the Poisonous Narcotism of Opium. By Henry Fraser Campbell, M. D., Professor of Anatomy in the Medical College of Georgia.

It is the design of the present brief communication, to call the attention of the profession to an important, and we think, most valuable application of Caffeine, as illustrated in a case of extreme narcotism from the effects of Opium.

Our knowledge of the vegetable alkaloids, and indeed, of the whole subject of Organic Chemistry, is of comparatively but recent date. In the year 1817, Tertturner, a German Apothecary, having announced the existence of Morphia, the spirit of investigation was immediately aroused, and the study of every class of organic bodies has become the favorite occupation of the chemist, and has yielded him a treasure of the most valuable results. This process of investigation is still ardently pursued, and, every day, some new organic compound is being added to the already lengthened list.

"The alkaloids as a class," says Dr. Parrish, "are the most powerful of organic principles, displaying their effects especially on the nervous system, which they so forcibly impress as to constitute, many of them, virulent poisons; a few, however, seem nearly destitute of active properties. They all contain nitrogen, and by destructive distillation, or by treating with alkalies, evolve ammonia; they evince their alkalinity

21
by restoring the color of reddened litmus, and though not always crystalline or even solid, they combine with acids to form definite salts which are crystalline; they also, like the alkalies proper, form double salts with bichloride of platinum.”

Most of the alkaloids are said to be but sparingly soluble in water, but they dissolve readily in alcohol, especially with heat. Ether, the essential oils, and chloroform, dissolve most of them, and almost all of them are soluble in benzine. “They are all precipitated from solution, whether alone or combined with salts, by tannic acid, which is hence, when taken immediately, one of the best chemical antidotes for them; they are precipitated by alkalies.”*

These principles exist in many plants, but not in a free state, being generally combined with some peculiar vegetable acid. “All really poisonous plants are believed to contain an alkaloid or neutral characteristic principle, except, perhaps, those few acrid poisons which owe their activity to resins.”†

To the presence of this neutral principle many of our most valuable remedial agents, especially in the vegetable kingdom, owe all their activity, and by it the phenomena they evoke from the animal economy is characterized.

Whatever may be the peculiar property of the crude vegetable, whether potent for good or for evil, that property is ever found to exist in a higher degree of intensity in its alkaloid representative; hence, of late years, since these principles are becoming better known to the Medical Profession, many of them have entirely displaced as remedial agents, their more bulky sources on account of their far greater potency and unmixed action. Thus quinia and its salts have entirely replaced, as an antiperiodic, the weaker and more bulky Peruvian bark, while the salts of morphia are rapidly supplying the place of all the other preparations of opium, and, except for the intensity of their action, strychnine and atropine would long ago have driven all the other preparations of nux vomica and of belladonna, out of the catalogue of remedial agents.

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*See Introduction to Practical Pharmacy, by Edward Parrish. Philad. 1859
†Ibid.
For a long period it has been well known to the profession, and even in domestic life, that coffee, *Coffea Arabica*, possessed virtues as a stimulant of a most valuable, and at the same time, of a peculiar kind. In the London Medical Times & Gazette, of June, 1855, Dr. Julius Lehman has shown that coffee is powerful as a stimulant in increasing the nervous energy, and that it also retards the metamorphosis of the tissues. It is further considered that one of the physiological effects of coffee is to lessen the elimination of urea. Prominent among the alleged effects of coffee is its *antisoporific* power, or that of inducing *wakefulness* when taken in large quantities, or by persons unaccustomed to its use. With this effect every one is familiar who has ever indulged in this common beverage.

The therapeutic applications of coffee in the form of infusion or decoction, have been various and long known to the Profession. It has been highly recommended as a remedy in Cholera Infantum*; it is said to quiet nausea in many cases of irritable stomach, a fact which we have ourself verified; its use is prophylactic as well as curative in intermittent fever—it has long been a valued remedy with some asthmatics—is said to be one of the best agents for overcoming the effects of alcoholic liquors—has been, from time immemorial, the favorite beverage of opium-eaters, and is frequently administered to counteract the effects of this and other narcotic poisons. The use of coffee for this purpose was common some forty years ago in this country, and several of the theses of the University of Pennsylvania, on the subject, were printed. Very strong *decoctions*, without sugar or milk, were recommended for this purpose. All opium-eaters are said to be great coffee drinkers. Beaujour, in his work on Greece, gives an account of an opium-eater who drank "more than sixty cups of coffee a day, and smoked as many pipes. All this was designed to counteract the pernicious action of the opium."

In the Edinburgh Medical & Surgical Journal for January, 1842, a case of poisoning is reported, caused by one and a

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*Dr. Pickford. London Medical Gazette, Nov. 24, 1845.
†See Materia Medica and Therapeutics, by T. D. Mitchell, M. D., &c.
quarter grain of sulphate of morphia, equal to seven and a half grains of opium. The cure was effected by gill doses of strong decoction of coffee frequently administered. Were it necessary, we could easily adduce many more witnesses of the therapeutic application of coffee, but the above is sufficient to show that it has been long known as a powerful agent in many diseases, and further, that it has been fully recognized as a valuable means of counteracting the effects of opium. We have for years been in the habit of giving strong doses of the decoction of coffee in cases of over-doses of opium, and have seldom treated a case without applying it—after other and more efficient remedies, as the stomach-pump, emetics, &c., have emptied the stomach—to re-animate the patient and to overcome drowsiness.

As we have just said, whatever may be the peculiar medical or physiological action of any vegetable medicinal agent, its alkaloid representative has been generally found to exercise that influence in a far more efficient manner than the crude source from which it was obtained. This is thought to be eminently the case, with regard to Caffeine, the alkaloid active-principle of coffee.

There are several vegetable alkaloids which are said to be identical with Caffeine, both in their chemical constitution and in their effects on the animal economy. Theine obtained from Tea, and Guaranin, from the Guarana—Paullina Sorbilis*—are each said to possess virtues which, in no respect, vary in their effects from that of Caffeine.

Caffeine is procured by exhausting bruised coffee by two successive portions of boiling water, uniting the infusions; adding acetate of lead to precipitate the principles which accompany the caffein; filtering and decomposing the excess of acetate of lead in a filtered liquor, by sulphuretted hydrogen; concentrating by evaporation and neutralizing with ammonia. The Caffein is deposited in crystals, upon cooling, and may be

*According to Von Martias, an extract is prepared in Brazil from Paullina Sorbilis, which is known there under the name of "Guarana," which is employed successfully in chlorosis, tedious convalescence, paralysis, the colliquative diarrhoea of Phthisis, and in hemiplegia.

See Dunglison's New Remedies, p. 573.
Narcotism of Opium.*

Purified by re-dissolving in water, treating with animal charcoal and evaporating.* It presents itself in the form of long, silky needles; is fusible, volatile and soluble in water, alcohol and ether.

Phobus is inclined to doubt "whether caffeine is of the importance that has been assigned to it; but Von Falck, from much observation, ascribes to it a highly powerful and even poisonous action. Experiments on the lower animals have been made with caffeine by several physiologists; Albers of Bonn, produced tetanic phenomena by its administration to a frog, and the same symptoms were induced by inserting a solution of the citrate of caffeine under the skin of the thigh of another frog." Mulder gave a grain of caffeine to a rabbit; the animal ate but little the next day, and aborted the day after. Lehman gave it in doses of from two to ten grains, and reports† that, "it caused violent excitement of the vascular and nervous systems, palpitations of the heart, extraordinary frequency, irregularity, and often, intermission of the pulse; oppression of the chest, pains in the head, confusion of the senses, tinnitus aurium, scintillations before the eyes, sleeplessness, erections and delirium; and, in all cases, there was an increase in the amount of urea secreted." It is extolled by Hannon and Eulenberg in the various forms of Hemicrania, and has been frequently used for the same purpose, by the practitioners both of England and of this country. Of the application of caffeine as an antidote in the poisonous narcotism of opium, we have as yet seen no published account, and hence we have deemed the subject of sufficient importance to call the attention of the profession to the details of the following case:

Extreme Narcotism of Opium promptly relieved by Artificial Respiration and the administration of Caffeine, by Injection.

Monday, Oct. 10th, 1859, 8 o'clock, P. M.—We are called in haste to Mr. F. H. T., aged 24 years, who, it was said, had taken

*Dispensatory of the United States, 10th ed., p. 1318.
†Physiological Chemistry.
laudanum, and was in imminent danger from the effects of the drug. We found the patient in the clerk's office of one of the hotels of this city. He was lying on a sofa with his head supported in the lap of a friend. His respiration was very slow, though not counted at the time—pulse full, but of nearly normal frequency—he was completely insensible—tongue and lips purple, and muscular system greatly relaxed. It was positively known that he had taken, in a fit of temporary depression, over one ounce and a half of laudanum, nearly an hour before the time of the present visit.

The condition of the patient was so alarming that we began the treatment by the pouring of cold water on the head till the stomach-pump could be applied—for on attempting to introduce the tube into the esophagus, respiration appeared to cease altogether—the entire muscular system was so completely relaxed that the tongue hung out of his mouth, and was pushed about by the end of the stomach-tube, in certain positions, folding back into the fauces, and apparently obstructing respiration. The attempt to use emetics was of course out of the question. The continued use of ice-water upon the head, and the occasional resort to artificial respiration, in a short time improved his condition a little—a very little—and we were willing to introduce the stomach-tube. This was effectually applied; large quantities of tepid water being repeatedly introduced into the stomach and again pumped out. Laudanum was detected both by its odor and color in the fluid first discharged from the stomach. At the end of an hour, his condition becoming apparently more urgent than before the use of the stomach-pump, he was taken from the clerk's office to a room on the second floor of the hotel, where he was undressed and placed in bed, and the application of ice-water to the head was resumed.

12 o'clock, midnight.—The condition of the patient was now decidedly worse than it had been at any previous time; the surface was cold, and purplish from imperfect aeration of the blood, the muscular system, if possible, more relaxed than ever, the respiration, fearfully slow, when counted, by the watch, was found to be but four to the minute. The intervals
between the inspirations were now irregular, and each time we had to resort to shaking and slapping the patient to provoke the automatic action of the respiratory muscles, and to raising him up suddenly to the sitting posture, for the same object. The tongue had to be constantly pressed forward with the fingers to prevent its falling back and obstructing the opening of the glottis. The imperfect and irregular action of the heart became now more alarming than ever. It was found that, in the reclining position, this symptom of the case was more alarming than when the patient was placed in the sitting posture. Several times the intervals between the beats of the pulse led us to fear that the patient had expired, but on elevating him, the action of the heart became more regular. He was now kept in the elevated position, and not allowed to recline except for a moment at a time, for fear that he would die immediately. Ceaseless efforts were now necessary on the part of his attendants to provoke the respiratory movements. Surrounded by his friends, several of whom were remarkably self-possessed and indefatigable, not a moment was allowed to pass without some effort, as by shaking, compressing the chest, &c., to excite inspirations. No time was now to be lost—but our best efforts at exciting respiration began now to fail to have any effect, and it was evident that artificial respiration was now, the only possible hope for the patient. This measure, under the circumstances, was a natural suggestion, but for reasons sufficiently apparent; it seemed impossible to carry it out in the present case; most of the ordinary means of effecting artificial respiration seemed to us impracticable, on account of the delay involved in their performance, and Dr. Marshall Hall's "Ready Method" involved the horizontal position, in which situation, it was clear to the minds of all present, the patient would die immediately.

Artificial Respiration in the Sitting Posture.

1 o'clock.—Under these circumstances, we devised a method of artificial respiration which was well adapted to the condition of the patient—indeed, the only one possible—and which we do not recollect to have seen reported any where in the writings of any one on this subject.
The patient was supported in the sitting posture, by an assistant kneeling on the bed at his back and holding his head erect between his hands; two other assistants standing on each side of the patient now took charge of an arm each, holding the limb firmly at the elbow and upper part of the forearm; the tongue was now pressed down by the handle of a spoon, or the fingers introduced into the mouth; the assistants having charge of the arms, were now directed to elevate these limbs simultaneously, carrying them above the head at an angle of about forty-five degrees, and dragging upon them so as to slightly lift the patient, the arms were then depressed and brought down close against the sides of the Thorax so as to compress the chest.

The effect of these movements was the following: At each attempt at lifting the body by the arms in this way, forcible traction outwards was made on the walls of the chest, through the pectorales major and minor muscles, the serrati and parts of the two latissimi dorsi muscles—giving rise to expansion of the walls of the thorax; the air was thus caused to enter forcibly into the lungs, and thus inspiration was completed. The arms were then brought steadily down, and pressed against the sides of the thorax and abdomen—compressing them and expelling the air forcibly from the lungs and effecting expiration.*

Under the use of the artificial respiration, the appearance of the patient was much improved. The color was restored to the face, the lips became redder, and the countenance more natural, though the relaxation of the muscular system was by no means lessened; if the head was left unsupported for an instant, it fell forward as suddenly and forcibly as that of a dead man. The artificial movements were continued for more than an hour, and though the color of the patient was improved and the heart's action became normal, still when they were omitted, there was found no improvement in the natural respiration, these being still, but four times in a minute, as before artificial respiration was applied.

*A more extended description of this method of artificial respiration will be given hereafter.
We now felt the necessity of adopting some means of introducing a stimulant or anti-narcotic agent into the system. Strong Coffee naturally presented itself to our mind, but the only preparation we could obtain at that time, was a rather weak infusion left from the supper at the hotel. It was clearly impossible for the patient to swallow anything, and we did not think it advisable to run the risk of introducing the stomach-tube in his present condition; we therefore called for a syringe, but the weakness of the coffee caused us to hesitate about using it, when, fortunately, the idea of Caffeine occurred to us, and we sent immediately for that preparation. The artificial respiration was then energetically resumed, in order to prepare the patient for being placed in the horizontal position. A small quantity of the Caffeine was rubbed upon the tongue and to the inner surface of each cheek. The patient was then laid upon his side, and an injection of the coffee with a large quantity (afterwards ascertained to be twenty grains) of the Caffeine dissolved in it, was administered by the rectum, with a common syringe. The patient was then immediately raised again to the sitting posture, and the artificial respiration resumed.

In less than half an hour, we perceived that occasionally, between the artificial movements, the patient would effect a natural inspiration—these became more frequent, and soon rose to about eight in the minute. He was then laid down and the artificial respiration omitted. The assistants, however, were directed still to remain on the bed and to retain their hold on his arms, that they might resume their efforts at any moment. An hour had not elapsed from the administration of the injection, when the patient, to the astonishment of all present, forcibly jerked his left arm from the assistant! (which was the first action of the voluntary muscles he had performed) and immediately began to twist himself in bed, and told those about him, angrily, "to let him alone!"

From this time, he did not again sink into the comatose state, and the relaxation of the muscular system did not return. The respiration became more and more natural, but he
remained drowsy, and efforts were continued occasionally to prevent his remaining too long asleep.

The condition of the patient during the remainder of the night, (from 2 o'clock till daylight) was very peculiar; his eyes were heavy, he seemed greatly inclined to sleep, and occasionally would snore a little, but yet he appeared quite cognizant of everything going on around him, and of all the remarks made by his attendants; he had great repugnance to being held or touched. During the earlier part of the narcotism, one of his friends, a young man, tried the expedient of tickling him on the ribs and lower part of the abdomen, with the hope of arousing him; then, the tickling had no effect whatever, but now, it seemed to produce the most painful annoyance, and vexed him beyond all control. The measure was advised, nevertheless, to keep him from falling asleep. He would lay apparently asleep, but before the hand could reach the surface, he seemed to be aware of the intention, and would select the offender from the whole crowd of his attendants, and aim the most angry blows at him with great accuracy; and, finally, on one occasion, before he could be restrained, he jumped out of bed and followed him to the head of the steps, threatening to shoot him if he thus annoyed him again.*

We left him at daylight. His drowsiness at that time was not very marked.

11th.—We called at the hotel at 10 o'clock, A. M., to see Mr. T., and were informed that he had “gone home to his own residence, nearly a mile distant, at the lower part of the city.”

12 o'clock, M.—We were called in haste to see our patient. Found him in a most excited condition; he seemed somewhat

We have been thus minute in the description of these latter manifestations, because this peculiar sensibility and irritability appeared to us to be the result of the Caffeine, and we think it important to relate every thing which evidenced its influence on the nervous system, when administered in such a large dose. The irritability was not the ordinary itching of the skin following opium; (he had that too) but an intolerance of all impressions made on the surface, accompanied with a singular watchfulness of the mind, (considering his tendency to sleep) on certain subjects. He never, for a moment, seemed to forget that he was in danger of being tickled, and on no occasion did he mistake any other necessary handling of his person for an attempt to annoy him. There was a clearness of the mind in this respect, which was truly remarkable.
Poisonous Narcotism of Opium.

alarmed, his face was flushed, his eyes presenting an unusual brightness; he complained of head-ache, great restlessness, and the surface was covered with a profuse perspiration; the pulse was full, quick and frequent. He stated that he had had an alarming attack of a nervous character, which he referred to irregularity and palpitation in the action of the heart.* This had subsided, however, after taking a stimulant, and his condition was such as just described. Prescribed the application of cold water to the head, and that he remain quiet at home till his excitement had subsided. He rapidly recovered and was well in a few days.

If in Caffeine, so powerful an alkaloid—possessing, in a concentrated form, all the antisoporific virtues of Coffee—we have thus found an antidote for the narcotic effects of opium, and one which can be applied even in the most extreme states, by injection, we must feel that an important extension of its application as a therapeutic agent, has been made, and that many lives may be saved hereafter, by its use. Reasoning from the result of a single case, it is true, however remarkable that case may be, is, we are aware, always more or less unreliable; but with the most jealous interpretation of the phenomena, as we observed them, we have been forced to the belief that the means used here, acted most powerfully, in producing the favorable result. Indeed, we have never witnessed sequences after the administration of a medicinal agent, which impressed us more fully with the conviction of cause and effect. We would, however, take occasion, in closing, to urge the repetition of the administration of Caffeine in cases of Opium-Coma, to a sufficient number of the many which are daily occurring under the eyes of the Profession, in order to prove or disprove the validity of our confidence in the remedy.

*We would here state that we would not advise the administration of the Caffeine in such large quantity, viz: xx grains, as we used in the above case. Did the occasion occur again, we should use repeated doses of v or x grains, till the desired effect was produced.
Jackson Street Hospital Reports. By Robert C. Carroll, M. D., of Augusta, Ga., Resident Physician.

Messrs. Editors—With your permission, I design reporting, from the note book of Jackson Street Hospital, the details of such cases as may be deemed most interesting to the Profession. These notes I have carefully kept during the progress of the cases, and from time to time I will furnish them to the pages of the Southern Medical and Surgical Journal, for the perusal of your readers.

Respectfully yours,

R. C. Carroll.

Augusta, April 17th, 1860.

Cases of Menstrual Derangement in Negro Women.*

The frequent occurrence of menstrual diseases among negroes, is a subject of deep interest to the Southern practitioner of medicine. The exposure to which negro women are liable, their proverbial carelessness of themselves, their reckless disregard of the precepts of their medical attendants, and their disposition, in some localities, to treat themselves or to submit ignorant and improper medication, in all affections involving their sexual organs, render them more liable than white patients, to prolonged cases of menstrual disease, and present difficulties to be overcome in their treatment, which every practitioner of much experience will not hesitate to acknowledge. The following cases having been submitted to treatment under circumstances in which we rarely have the opportunity of observing and recording from day to day—the details of practice in negro patients, viz: in a Hospital under the eye of the physician. I hope the following report will be found more accurate and fuller than those made under the ordinary conditions of plantation or private practice.

1st. Report of a Case of Hysterical Convulsions of long standing, treated with Tonics and Cautery to Os Tincae.

April 25th, 1859.—Entered Jackson Street Hospital,

*These cases were treated under the daily superintendence of Drs. H. F. and R. Campbell.
Mary, a mulatto woman aged about 24 years, property of Mr. J. B., of Edgefield District, S. C. This case was kindly sent to the Drs. Campbell by Dr. Elbert Bland, of Edgefield village. The history of the case, as given at the time, was the following: From the age of fourteen, Mary's catamenia had been irregular, both as to time and quantity. She had had but one child, when about 18 years of age, which only survived three days. For some eight or nine years past, she had been affected occasionally with hysterical symptoms, which were not severe, and manifested themselves at first, by a lethargic and obtuse state of the nervous system, more particularly about the time of the menstrual period; but latterly, these symptoms had become more frequent in their occurrence, and more serious in their character, being attended frequently, by decided convulsive movements, followed by stupor of more or less duration. According to the statement of those accompanying her, these symptoms had recently become of daily occurrence—generally about daylight in the morning. Has not been able to do work of any consequence for many months.

Examination of the Case.—The present condition of the case is the following: She is pale, somewhat emaciated and anaemic, tongue and lips white and bloodless—presents a listless and melancholy expression of countenance. Has diarrhoea, the discharges being large, thin and watery—frequency of about every one or two hours. Spine more or less tender on pressure throughout the entire length, more particularly in lumbar region. There is also tenderness on pressure over the region of the womb, extending up as high as the umbilicus.

By digital examination per vaginam, the os tinae is tender to the touch, causing her to shrink from the pressure of the finger. Leucorrhœa exists, but is by no means abundant. On viewing the womb and interior of vagina, through the speculum, the os tinae is found to be quite tumid and of the most florid color—the tumefaction has very much contracted the canal of the neck of the womb. The walls of the vagina are apparently healthy, but covered
in certain places with a thick whitish leucorrhoeal discharge, a small quantity of which seems to ooze from the mouth of the womb.

The Drs. Campbell wishing to ascertained the truth of the statements made by the patient, in regard to her "convulsions," and also their particular character, directed that another woman should remain in the room with her, who had directions to call me at the coming on of these attacks. On the second morning after her arrival at the Hospital, I was called by the attendant at daylight, to witness Mary's condition. I found her lying in a state of apparent unconsciousness and lethargy, somewhat straightened backward, her lips compressed, and her eyes tightly closed. She was aroused with much difficulty, and her behavior during the attack, and after being aroused, was such as to convince all present that any suspicion of deception on her part, was entirely unfounded. The attack, though not a true convulsion, was certainly genuine of its kind. It appeared to be what may be called Hysterical Catalepsy. She continued to have these attacks frequently for about three weeks after her arrival.

**TREATMENT.**

*April 25th.*—Rj. of Prepared Chalk, 5ij.
Sugar, 5ss.
Gum Arabic, aa, 5j.
Tincture of Catechu, 5ss.
" of Opium, 5vj.
Camphor Water, 5vj.

Mix and write;

Dose, 1 dessert-spoonful every two or three hours, till dejections are arrested.

*April 26th.*—Patient expresses herself as feeling better to-day—diarrhoea somewhat checked. [The mixture was continued till four ounces were taken, when the bowels resumed their normal action.]

*April 30th.*—Prescribed the following: Rj. of Muriated Tincture of Iron xx drops, 3 times a day, in ½ tumbler-full of sweetened water. Diet of the most nourishing kind.
Beef and beef soup at dinner, bread and molasses at other meals.

May 5th.—The tincture of iron has been continued to the present time. Complains of pain in the loins and aching in the thighs and knees, which she attributes to the coming on of her "monthly sickness." Prescribed laudanum xx drops, and directed hot mush poultice to lower part of abdomen to relieve pain and to procure rest.

May 6th.—Menstrual discharge has made its appearance in small quantity. Prescribed ammoniacal tincture of guaiacum; dose, 1 teaspoonful 3 times a day. [This prescription was continued to the 12th, having the effect, as appeared to me, of relieving greatly the pain, and also of keeping up the discharge in fuller quantity. The discharge ceasing on the 12th, the Dewees's guaiacum mixture was discontinued. The entire amount discharged, however, was but small, and the menstruation could by no means be regarded as normal.

13th.—Muriated Tincture of Iron resumed in similar doses as before.

23rd.—Vaginal examination with speculum, reveals the neck of the uterus much congested and florid. The os tincæ also presented an inflamed and patulous appearance, intensely reddened within. Application of the solid nitrate of silver was made by Dr. H. F. Campbell freely to the neck of the womb, and the pencil pushed through the mouth of the womb into the canal of the neck. The patient experienced little or no pain, but was directed to remain in bed for the rest of the day.

25th.—Prescribed compound mixture of iron, (Griffith's myrrh mixture), dose, 1 table-spoonful 3 times a day.

28th.—The patient expresses herself as being better in every respect, than she has been for a number of years past. She is increasing in flesh, and has regained her strength; is lively and cheerful. Her whole appearance very greatly improved. Has had no appearance of convulsions or other nervous symptom for nearly a week.
June 5th.—The patient has continued the iron mixture to this date. The Catamenia again made its appearance on the 3rd, unattended by pain or other unpleasant symptom. She says that she does not remember any period when she has been so entirely free from pain in her sickness—the discharge coming away so perfectly natural and so freely.

8th.—Mary having completed her menstrual period in the above normal manner, and having had no recurrence whatever of her nervous symptoms—her owner being in the city, we deemed it safe to avail ourselves of the opportunity of sending her home, and she was discharged from the Hospital to-day, her owner being requested to keep her from exposure to the sun for a while, till her convalescence be fully confirmed.

March 29th, 1860.—More than nine months after the discharge of the above patient, Mr. J. B. being again in the city, reports that Mary remained about the house and yard for three weeks after her return home, in order to carry out the directions given at the time of her leaving. At the end of that time, she requested to be allowed to go into the field with the other hands, and has continued at work and well ever since, not having had the slightest return of any of her old symptoms.

No case could have been more satisfactory, either in its response to remedial measures and in its final result, than this one, the notes of which I have above reported. The case may be considered of particular interest on account of the long duration of the disease of the womb, and the variety of alarming symptoms attending it. That a deranged condition, as inflammation and engorgement, of the neck of the womb is competent to arrest the regularity of the menstrual flow, and change the normal quality of the discharge, no one familiar with these cases will pretend, at the present day, to deny. Anaemia chlorosis and the many evidences of blood-derangement and general loss of stamina which attend upon imperfect or obstructed menstruation have too often, in my humble opinion, engaged the attention
of the practitioner, in cases where the local affection of the womb, and in most instances the neck of the womb, has been the offending locale of the disease, and very often, the very fons et origo of the entire catalogue of symptoms, whether they refer, on the one hand, to the nervous system, as manifested by lethargy, spasmodic tremors, convulsion, or other hysterical phenomena; or on the other, by altered secretion, impaired nutrition and general debility. Cases are often treated for months together, with Ferruginous tonics, the so-called emmengagues, and every variety of general medication, without the slightest benefit; when, did the practitioner take the trouble to make a specular examination of the neck of the womb, he would there find such an amount of unmistakable local disease as would lead him, without hesitation, to the use of local remedies. It is seldom of any use to attempt to correct the condition of the blood, from which the menstrual elimination is made, until the eliminating organ—the womb itself—is put in condition to perform properly its functions.

I do not pretend to say that tonic and other specific treatment is not advantageous—for in most cases they are highly beneficial, and can seldom be dispensed with, even where cauterization is the principal treatment, but where there is much local engorgement in the neck of the womb, we know of no plan of treatment offering any rational hope of relief, which can be compared to frequent applications of nitrate of silver directly to the womb through the speculum.

I find three or four more cases of menstrual derangement on the books of Jackson Street Hospital, which present many points of interest; especially one of Chlorosis, and another attended with violent hysterical convulsions at the menstrual period. The present report has, however, occupied more space than I intended, and their further records will be deferred to a future number of the Journal.

(To be continued.)

It may not be uninteresting to some of your readers, to report a singular case of fetal peculiarity, which came under my observation at the time of delivery, at the full term of utero-gestation. On the evening of the 17th ult., I was called to Mrs. ——, in labor, about two miles from the village in which I reside. Early after my arrival, and after the necessary preparations were made, I proceeded to make the usual digital examination, whereupon I found considerable dilatation of the os uteri, with a corresponding amount of protrusion of the membranes, and expulsive pains of moderate force rapidly recurring, but experienced great difficulty, in consequence of the unnatural feeling of the part presenting, in determining the precise presentation. The labor, however, advanced rapidly, and soon the membranes were ruptured, discharging their fluid contents and revealing to my finger a very remarkable condition of that portion of the head which constituted the more prominently presenting part. The moment the child was born it gave a jerk or two and immediately expired; and at the same time, upon examination, I ascertained that the circulation in the cord had also entirely ceased. I hastened to sever the connection between mother and child, turning the latter over to a negro woman and addressing myself to the wants of the former. After waiting upon the uterine contractions about an hour, I removed the placenta manually, and thus completed the delivery.

The child being dressed, I now obtained permission to examine it instrumentally. I found the cranial bones, all above a line drawn circumferentially from the upper margin of the orbits to the occipital protuberance, entirely wanting, with here and there rough prominences upon the edges of the projecting bones beneath. A delicate expanse of dermoid tissue was found stretching across the intervening
In a Fœtus at full Term.

chasm, with something resembling a thin coagulum of blood: partially organized and of some permanency, and about five or six inches in circumference, closing its centre and appearing to have had some previous connection with a diseased brain. An incision through this collapsed covering revealed nothing but the irregular upper surface of the cranial base beneath.

If you can give any information in regard to the true nature of the condition of things detailed above, I would be pleased for you to add some remarks to that effect. It seems exceedingly remarkable to me that the fetus, under the existence of so important a deficiency in the cerebral portion of the nervous system, should have survived until its full time arrived—as I was assured, and had other reasons to believe, was the case—for it to assume an independent existence. Can it be possible that its connection with, and dependence upon its mother, could have maintained its life until the period of its birth?

Remarks.—By Henry F. Campbell.

On a careful reading of the above report, we are compelled, taking all things into consideration, to recognize a case of Anencephalous monstrosity. The object found beneath the skin "resembling a thin coagulum of blood, partially organized," was probably indeed, an accumulation of blood effused from the small vessels of the scalp during the progress of the labor—this, coagulated in the tissues of the scalp or among the membranes within, constituted a kind of thrombus easily accounted for, and attributable, rationally enough, to the pressure attendant on labor.

The occurrence of anencephalous monsters is sufficiently rare to render the record and description of each a matter of much interest to the profession. Since the work of Geoffroy St. Hilaire, and other writers of about the same period, the subject has been studied with much energy, and each case has been subjected to diligent investigation, and the result has yielded much light, both on the subject of development and on the respective importance of several
parts of the organism to the growth, nutrition and well-being of the Fœtus. The nervous system especially, has been studied in these relations by several of the best physiologists of a more recent date. The result of these observations has been to confirm the view, previously gaining ground, that the cerebro-spinal nervous system or the nervous system of relation, is not necessary to nutrition during intra-uterine life, and that its non-existence is not incompatible with the normal progress of pregnancy, nor in the least, with the fullest development of the Fœtus—these Fœtusses becoming developed and passing to full term exactly in the same manner as when the entire nervous system is present.

Two remarkable cases reported, the one by Mr. Lawrence, and the other by the late Dr. Marshall Hall, of London, now occur to our mind which will fully substantiate the above assertion, and will also throw some light on Dr. Gardner's case herein presented.

Mr. Lawrence's case was that of a Fœtus at full term, and well developed, in which the brain was entirely absent; but Dr. Marshall Hall's case was still more wonderful, and of a value, in establishing certain facts in relation to the nervous system, which can scarcely be too highly estimated. The fœtus was born at full term, well nourished, perfectly developed, but devoid of every trace of either brain or spinal marrow; presenting an absence of the entire cerebro-spinal nervous centres.

Dr. George Davy,* in a paper on the Ganglionic System, read before the Medical Society of London, the object of which was to prove the entire independency of the organic nervous system, brought forward a variety of facts, some of which were of startling pertinency in corroboration of his views. "After some preliminary remarks, intended to show the unsatisfactory and contradictory opinions expressed by some of our most popular writers on physiology, viz: Wagner, Todd and Bowman, Carpenter and others, con-

*See London Lancet, June 25th, 1853.
carning the Ganglionic System, he affirmed, on the authority of many good names, that the ganglia of the sympathetic nerve are those parts first formed in the foetus, and that this same fact obtains equally, it was premised, through the whole kingdom. The early organism of birds was referred to in confirmation of that opinion, which assigns to the solar ganglion and its dependencies, an existence anterior to any other part of the animal fabric.” He then referred to the two cases we have just adduced, viz: the Anencephalous and Amyelencephalous monsters of Dr. Lawrence and Dr. Marshall Hall. He argued that, if in the latter instance, the functions of secretion, absorption and nutrition were duly and sufficiently executed without any aid from a cerebro-spinal system, then was this latter, in no instance, either requisite or necessary in any way, to the integrity of such functions in the animal economy. “The ganglionic system,” said he, “is perfect at birth, and its functions are also perfect; this is completely organized, while the brain is nothing more than a mere pulpy mass, without any kind of function or use to the individual in possession of the same; the one is in active and increasing operation, the other is but a blank, doing nothing, useless; the ganglionic system executes its function instinctively, whereas the brain, if not the spinal cord, requires time and experience and direction, ere it perform its functions, either for good or for evil.”

The monstrosity reported by Dr. Marshall Hall, organically considered, may be compared to some of the lower classes of animal life, the Medusaræ; these perform their functions, it is thought, entirely instinctively, and they are solely of a preservative character. Secretion, absorption and nutrition are the physiological ends of their existence, and it may therefore be inferred that these animals possess only a ganglionic or organic nervous system. The nervous systems, then, of the Amyelencephalous monster, and of the Zoophyte are “precisely similar, and their animal functions on a par.”

In the paper here quoted, Dr. Davey farther remarked that
the records of any lunatic asylum would afford many instances of individuals who were reduced to a mere vegetative or organic existence by disorder affecting the brain and spinal cord; such patients live, oftentimes, many years with their cerebro-spinal organism so disorganized as to be perfectly useless to them; "unconscious, without feeling, emotion or desire, void of thought, without hope, joy or passion, lost to all normal sensation, or, perhaps, without feeling of any kind, and incapable of only the most imperfect motive power, enfeebled, paralytic, they nevertheless digest, secrete, absorb, in a word, carry on, year by year, the strictly vital functions exactly as the mal-organized Foetus does; exactly as the frog or fish, deprived of its brain and spinal marrow did; and exactly as the polypus is in the habit of doing." We have thus referred to a few of the facts which bear upon Dr. Gardner's case of "Foetal Peculiarity." These remarks might be greatly extended, and many other instances adduced.

From what has been shown above, it will be readily seen that no amount of disorganization, or even the entire absence of both brain and spinal marrow, is incompatible with the functions and nutritive processes of foetal life—and that these phenomena in the present case are by no means such as should excite surprise in view of the well-estalished history of former cases.

In the Museum of the Medical College of Georgia, the subject of monstrosities has received great attention, and many valuable specimens referring to the cerebral deficiency are there to be found. They are, all of them, of the white races, like the case reported by Dr. Gardner above, and we cannot now call to mind a single instance of this kind of deformity in the pure African race. According to our observation, idiocy is very rare among negroes, while it is not uncommon among mulattoes. We may here further state that, so far as our own experience extends, congenital deformities of every kind are of very rare occurrence in the negro. We have never seen among them a single case of club-foot, and only heard of but one, while a case of congenital ab-
Dressing of Scalp Wounds. By B. W. Sparks, M. D., of Thomaston, Ga.

[In the March number of the Southern Med. & Surgical Journal, for the present year, we commended to our readers the mode of dressing wounds of the scalp by tying the hair across the incision, in order to avoid the use of sutures and also the shaving of the scalp. The following brief note from our correspondent, gives the details of a case which will interest our readers, both on account of the use of the Silver Sutures and as one in which the hair-tying plan was successfully adopted.—H. F. C.]

THOMASTON, GA, March 22, 1860.

Prof. H. F. Campbell:—

In the March number of your Journal, I noticed your editorial remarks in reference to wounds of the scalp. Let me trespass on your precious time, for a few minutes, and I will relate a case that occurred in my practice during the past year.

During the month of June last, a young man came into my office with an incised wound of the scalp, three inches or more in length. After arresting the hæmorrhage and removing the clots, I applied four or five silver sutures. After the application of the sutures, I divided the hair into a number of divisions, on each side of the wound, then commenced plaiting (instead of tying) the hair into as many plats as I could conveniently (the more the better). After

*The case above referred to, will be found reported by us in American Transactions, Vol. — for 1851, and also in a former volume of this Journal. Casts of the same will be found in College Museum.
finishing the plat, I placed it on the wound for a compress, passed a bandage over the compress of hair. On the eighth day I saw my patient—the wound had healed without any pain. I removed the sutures, and did nothing more.

Yours, respectfully,

B. W. SPARKS.

Pathology of the Pituitary Body. By MIDDLETON MICHEL, M. D.

[Dr. Michel presented to the South Carolina Medical Association the following interesting case, which we select from a pamphlet kindly sent us by the author. We regret that our space will not allow us to give more than the report of the case and the author’s conclusions. The pamphlet is very valuable as a whole, on account of the profound research Dr. Michel has made into the literature of his subject. He seems to have collected the entire record of both facts and opinion, bearing upon diseased states of that most mysterious of all objects of the Encephalon—The Pituitary Body. The pamphlet is well worthy preserving, as authority on the subject.—Eds. S. M. & S. JOURNAL.]

In the fulfilment of no special function of which we are cognizant, the secluded and even concealed position of the Pituitary Body invests it with peculiar mystery in the eyes of the medical inquirer. As a most dependent and delicate division of the encephalon we discover it buried in the central and deepest depression of the base of the cranium, as though removed by nature beyond the reach of either observation or research. Hidden in the fossa of the basisphenoid, it lies within osseous parapets and bulwarks on either side, which are lined, enclosed and covered in by reduplicatures of dura mater, most securely insured against those destructive influences which at any time may and often do encroach upon directly vital portions of the intra-cranial organs. Never injured by the most fearful accidents involving the rest of the cerebrum, and often the only remaining integral part in absolute destruction of the brain, either from injury or disease, it stands impregnable against assaults of every kind save the insidious and searching invasion of cer-
tain morbid processes which form a part of the equally obscure history of its diseases.

I consider it, therefore, no unimportant labor, while relating the particulars of the following rare and interesting case, which was sometime since under my professional care, to collate and arrange such observations as bear any similitude to it, which the literature of our science may present. Offered in the form of a memoir on the diseases of the pituitary body, it may be viewed perhaps in the light of a contribution to this part of pathology, and this task I have undertaken the more willingly, as the reader will perceive from the few scattered cases on record that the most extensive experience in pathological research has not always furnished analogous examples.

While my observations have led to the discovery of some morbid conditions in which the pituitary gland has sometimes been seen, and which it will be the object of this memoir to exhibit, in such order of sequence as the subject may suggest, yet I have no where encountered the recital of a case in which the morbid processes and the symptoms were like that which I am to describe, unless we except a very brief statement by Rokitansky respecting cancer of this body. I have, therefore, reasons to regret that the only case strikingly like my own, at least in the extent of injury which the bones of the cranium underwent, leaves me without any details from the pen of so distinguished an author, but those which he so laboriously gathers from the labors of the Amphitheatre.

Though we may rise from personal and bibliographical inquiries, such as I now attempt with no better knowledge than we before possessed of the functions of an obscure part of the encephalon, yet I cannot but believe that a careful pathology of its several parts, with observations on such concomitant symptoms as seem to bear a relation of cause and effect, though not always significant of the purport of the organ, will at least be acknowledged as an important auxiliary in physiological discussions.

A negro man, Archibald, the servant of Dr. W. Bessel- len, of Grahamville, South Carolina, was addressed to me by letter, and placed under my professional care on the 3rd of March, 1855. Aged 35 years, of middle stature and robust frame, Archy had for many years pursued the carpenter's trade to the complete satisfaction of a master, who looked upon him as one of his most valuable aids. During a long immunity from disease of any kind, his mode of life
both moral and physical offered the surest guarantee against those reverses in health, which are so often the consequences of folly or vice; nor were the approaches of disease even suspected, when from time to time in the midst of labor, he would complain of slight uneasiness about the head. But the frequency of this occurrence led him to detect, on a narrow examination, some cloudiness in the vision, and this appeared to give greater distress since it soon prevented him from "sighting his work with either eye." Believing that he was becoming near-sighted, he resorted to the use of spectacles in the vain hope of deriving some assistance from them, but the cephalalgic and amblyopic symptoms, which were first noticed some time in September, 1851, steadily increased. Advancing at first pari passu, the headache at length assumed an intermittent character, while the imperfection of sight progressed with such singular rapidity that he became almost blind. Obliged to discontinue his work, his sufferings were occasionally increased by intense pain in the frontal region, accompanied with a sense of fullness about the orbits. The eyes, however, preserved their natural lustre, and but for the amblyopic symptoms, would have attracted no attention. These difficulties continued for some months, when it was perceived that the globes of the eyes had obviously increased in tension and apparently in size. The general health had undergone no change, and though dejected in spirits, he seemed full of hope when he came under my personal observation in March. His appearance and gait were now very much those of an amaurotic individual; erect, with the chin elevated, the eyes largely opened, and the pupils almost immovable, he advanced slowly and cautiously forwards, able still to discern dimly the largest objects. The eyes, perfectly transparent, were resilient not painful upon pressure, and the pupils were dilated. He had never experienced photopsic phenomena, but complained of throbbing and augmentation of pain upon the inclination downward of the head, as in stooping, while even the recumbent position increased his sufferings. I was inclined to consider the case one of hydrophthalmia, though it was impossible to blame either a scrofulous, scorbutic or syphilitic cachexia, and indeed a more careful inspection discovered in a very short time that the increased size of these organs was only apparent, as there evidently existed a protrusion of the eyeballs on both sides. This appeared to me to point unerringly to the presence of an intra-cranial tumor. It were
Pathology of the Pituitary Body.

needless to refer to the interest with which my patient now
inspired all who saw him, nor to the daily record of a case
in which the insufficiency of remedial agents was so clearly
to be tested. Purgatives, alterative doses of mercury, com-
bined with digitalis, squills, and hyoscyamus; hydriodieate of
potash, blisters, setons, etc., found their alternate place in a
treatment of some weeks, ending in unqualified disappoint-
ment as to the efficacy of any. The ptosis notably pro-
gressing left no doubt as to a growth of some sort exerting
pressure from behind simultaneously upon both eyes. The
globes preserved their parallelism and were now most sen-
sitive to the touch. There was perceived an oedematous
distension of the sub-conjunctival areolar tissue, the result
of pressure upon and interruption to the circulation through
the ophthalmic vessels. The remarkable extent to which
this chemosis proceeded, as will presently be seen, and the
exacerbations of pain so frequently felt within the orbital
cavities, have led me often to believe, that about the end of
April, when these phenomena occurred, some phlegmonons
inflammation of the orbital tissue must have taken place,
for we were compelled to return to treatment which had
been entirely suspended. Fever supervened, the head
symptoms were so much exasperated that my patient be-
came insominious, delirious, and at one time almost frantic.
This condition lasted several days, and then left him com-
paratively easy. The conjunctiva were red and considerably
chemosed, so as almost to cover the eyes, while these pro-
ected entirely beyond the palpebral fissure. The inflections
of these congested membranes advanced equally over both
eyes until their cornea were completely covered in. These
denuded surfaces, exposed to laceration from the slightest
cause and bleeding at the touch, became partially protected
by incrustations, forming fungous looking growths upon
the protruded globes, and an exophthalmia of so hideous a
degree as to give the countenance an appearance, which I
shall ever regret not having perpetuated at the time by a
daguerreotype.

Consentaneously with these destructive changes in the
orbit, a train of other phenomena followed in rapid succes-
sion worthy of peculiar attention; in the right temporal
region a swelling made its appearance, at first soft and
painful, afterwards becoming harder and less sensitive; it
raised the aponeurotic layer of the temporal muscle without
affecting the color or texture of the skin; pressure upon it
produced no cerebral manifestations, as neither convulsions
nor coma ensued. At this stage, deafness to some extent on the right side was added to the other symptoms; he had occasionally complained of strange sounds in the right ear, disturbing him by day and night, which I presumed were to be referred to some encroachment upon the auditory meatus by the tumor, his nostrils also were so much obstructed as to prevent smell and to cause a snuffling respiration. I noticed his inability to walk towards me without assistance, when he would stagger and stumble and almost fall, from apparently a want of power to co-ordinate his movements, which reminded me at once of the phenomena so often witnessed in animals from whom the cephalo-rachidian fluid has been removed, or upon whom section of the muscles of the neck has been performed, and which in him as in them I referred to some unusual pressure upon the oblongata. There was no hemiplegia nor paralysis. Dr. Besselleu informed me he remarked a singular peculiarity in the sense of taste which induced a somewhat imperative demand for sweets of every kind, so far imperative that the appetite had quite failed the patient, and these alone would he eat.

During the entire progress of this case the intellectual faculties underwent no change commensurate with the almost universal destruction of the senses. It is true, from a very early period his indifference to all things about him—an extreme apathy, was the subject of general comment. I think I also observed a degree of forgetfulness which showed that the memory perhaps was the only faculty impaired; but in every other respect his rational replies served only to impress us with a sense of his hopeless despondency. With a weak but rapid pulse ranging between ninety (90) and one hundred and fifteen (115), with varied exacerbations of the above symptoms, he continued in much the same state until September 1st, when, without any previous abdominal trouble, he was seized with diarrhœa of obstinate nature, which continued until the 11th, when he died.

AUTOPSY.

The autopsy of this most interesting case was performed by my friend, Dr. Besselleu, in the presence of several physicians; and, I must record publicly my indebtedness to him for the valuable notes taken on the occasion with a promptitude and readiness which reflect greatly to his credit, and a precision and accuracy leaving scarcely anything to be desired.
When the calvarium and dura-mater were removed, the brain was found injected, though its surface exhibited no signs of disease. There were but slight traces of ependymitis. As the anterior lobes were raised there was discovered, on the median line, occupying the site of the sella turcica, a tumor resembling in size, form, color and consistency a ripe blue fig, which became detached from its infundibular dependence by the very method necessary for its exhibition. From this tumor a pediculated mass of much larger size extended beneath and to the right temporal fossa, unattached to either cerebral lobe, forcing its way through the base, orbito-nasal, and right side of the skull. The anterior and inferior surfaces of both hemispheres retained the indented impress of the morbid mass. Pressure upon this latter forced both eyes still further out of their sockets. An attempt was made to dissect out the whole tumor, but its extent, insinuation through the absorbed osseous parts, and the weakness of its sac, rendered this most difficult. Incisions were then made into the tumor at several points, when there issued a dark and grumous substance, of a very offensive odor; this permitted the parts beneath to be examined, and the extent of injury which the bones at the base of the skull had sustained was found to be considerable; the almost entire centrum of the sphenoid save its lesser wings was destroyed, the absorptive destruction had ravaged all the most cancellated and lamellated fabrics around, dipping into the ethmos, tearing up the floor of the orbits, and involving the greater part of the frontal plates which roof them in; respecting only the denser structures, as represented in the petrosal and basilar parts of the skull, it was found to have perforated the squamous portion of the right temporal, and could be seen protruding beneath the skin in that region, as had been suspected during life. The finger introduced recognised disintegrated speculae of bone in many directions along the base of the skull in the sphenoid region, and could perforate with ease the most attenuated points. The nerves were found but little influenced by the disease around them, and though not changed in structure, singularly reduced in size; among other circumstances noticed, the optic nerves were mere threads and pressed perfectly flat, the pons and the medulla oblongata were so far atrophied as not to exceed the little finger in size.

EXAMINATION OF THE TUMOR.

A portion of the tumor, with one of the eyes, was placed
in alcohol. The eye was perfectly sound, its tunics were readily separated, presenting no change or deposit of a malignant kind. The tumor, spheroidal and lobulated in shape, seemed composed of a neurilemmatous sac, containing a diffusent and in part gumous liquid, as though the parenchyma itself had been resolved into a hematoid fungus. Upon the fibrous sheath of this tumor, vessels rami- fied in various directions.

**MICROSCOPICAL APPEARANCES.**

It was sometime before I examined any portion of the contents of this sac with the microscope. The prolonged action of alcohol had then evidently altered its nature to some extent, for I was now able to make sections through its congealed and coagulated substance, which presented a section-surface in some respects resembling the fibrin-ated coagula and decidua of an abortion, with a somewhat greater regularity of arrangement. The color was brown or russet, with an intermixture of pigment deposit, not, however, to any great extent, and by no means the same which we see in the so called melanotic tumors. A layer of sufficient thinness exhibited an ill-defined trellis work of elementary granules, held together by an amorphous and hyaline stratum of doubtful character. I examined certain disintegrated particles which I detached from the centre of the growth, under the impression that here, where the alcohol had least affected the mass, I might obtain some structural feature which would identify it, but save the ele-mentary granules and a few capillary vessels, I could dis-cover no nuclei, nor cells either spheroidal, caudate, elongate, or angular. No stroma appeared to enter into its composition.

Notwithstanding so very indefinite a result, there can be little doubt of the nature of this alien growth. The rapidly growing acute cancer is always medullary, and such are the varieties of this class of carcinoma that we may reasonably expect to find every grade of consistency from that of fibro-cartilaginous to one of semi-fluid or liquid nature. The destructive effects of this rapid extension will lead to the same conclusion. The deep coloration in some parts which I have spoken of as pigment deposit, was evidently meta-morphosed hematine, from the extravasate which composed a great portion of the tumor, and differed perhaps from melanotic pigment, which is possibly due to a dyskerasial state of the hematine, if it be not indeed a development
within newly formed blood cells as some pathologists have suggested.

The pathological characteristics of this case are the development of a bilobular tumor within the sella turcica, and the osseous destruction accompanying it. The morbid alteration which the pituitary here underwent, was, as we have seen, one of a cancerous nature, and I now propose, in search of other varieties of the same affection, to examine the diseases to which this part appears to be liable. But alterations in the texture of this cerebral hypophysis are not well determined, and an attempt to discuss them in a connected order will scarcely be satisfactorily accomplished. Until this occasion, I had met with but few changes in the structure of the pituitary body, most frequently finding it unaffected amidst remarkable evidences of disease throughout the rest of the encephalon. Atrophy I remember to have noticed in the autopsy of an aged woman, whose brain, condensed and firmer than normal, did not fill the cranial cavity. After removal, it exhibited so diminutive a nodule attached to the tuber cinereum, that a search was made in the supra-sphenoidal fossa, for the body, which we supposed was accidentally detached. In this instance, atrophy amounted almost to the absence of the part. Atrophy may result from mechanical causes, as in chronic ependymitis, when effusion in the middle ventricle exerts pressure upon this part. It has been noticed by most authors, especially by Morgagni, Wenzel, Cruveilhier, Rokitansky and Lebert.

Hyperemia, unaccompanied by meningeal congestion, when it does exist, must frequently escape detection. Rokitansky* is the only writer who speaks of its independent existence, as occupying the anterior vascular lobe and infundibulum, in young persons. He even mentions apoplectic extravasations in its substance.

If we are warranted in drawing any conclusions respecting the nature or the functions of this body, from researches into its diseases and their most frequent symptoms, they would seem to be:

First, That the pituitary body, however largely developed in some animals, is not a primary division of the brain, or a true encephalic ganglion, since its complete destruction is never accompanied by loss of intellect, motion or sensation, beyond what may be satisfactorily accounted for by the necessary pressure which the morbid

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growth exerts upon more essential parts of the encephalon.

Secondly, That from several of the morbid processes enumerated in this memoir, we have strong proof of the identity of the nature of this hypophysis with certain so-called vascular glands, such as the thyroid, thymus, spleen, and suprarenal capsules.

Thirdly, That while the diagnosis of its morbid conditions is rendered somewhat obscure from the absence of any ascertained function of the part, yet their almost constant connection with the simultaneous production of amaurosis in both eyes, with absence of symptoms of cross paralysis will indicate the seat of the disease, when compared to morbid states of either hemisphere.

And fourthly, That the long continuance of disease in this situation may propagate inflammatory action to neighboring parts, followed by apathy, somnolency, syncope, cophosis, and other symptoms obscuring the diagnosis.

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On Bloodletting in Pregnancy. By M. Silbert.

This is one of the Prize Essays of the Academie de Medicine. The author believes that as a consequence of the reaction against the abuse of bleeding in pregnancy, practitioners in our own times are too sparing in its employment. There is, in fact, a tendency to the same exaggeration with respect to the chloro-anæmia of pregnant women, which formerly prevailed with regard to plethora.

"That great consideration should be paid to chloro-anæmia in the pathology of pregnancy is right enough, but only on the condition also of not overlooking plethora, a state of complete reality, and which did not exist merely in the imagination of our predecessors. It is only by studying pregnancy under this double point of view, and taking into account at the same time the 'nervous condition' and albuminuria, which also play their part in the production of the accidents with which it is accompanied, that we can embrace the entire truth. This is not done by sacrificing one point of view to the other.

"The determination of the relative frequency of these different conditions as causes of the diseases of pregnancy, would be of very great importance as regards the general indications for bleeding; but this point of medical statistics is far from being elucidated, and it is not in a restricted circle like Paris that the elements of a very exact appreciation are likely to be obtained. For the practitioners of
Bloodletting in Pregnancy.

great cities, whose observations are for the most part made on women etiolated by misery in the hospitals, or relaxed by all the delicacies of luxury in private practice, chloro-anæmia and the 'nervous condition' predominate in the pathology of pregnant women. But the country practitioner attributes to the richness and exuberance of the blood most of the accidents which accompany gestation." (tome xxi. p. 117.)

Having premised thus much, M. Silbert divides his subject into three parts; in the first he treats of its history, in the second he considers the general indications for bleeding in pregnancy, and in the third he passes in review the particular cases which may call for its administration. We pass over the historical part, and proceed to the next.

GENERAL CONSIDERATIONS ON BLEEDING IN PREGNANCY.

The modifications which pregnancy produces in the system are of two kinds: first anatomical and functional, which are constant and essential to pregnancy, having their seat in the uterus itself; and secondly, sympathetic, which are eminently variable. The accidents which are due to the mere physical development or acquired functions of the uterus are admitted at all hands to be best allayed by antiphlogistic treatment. The sympathetic modifications, which are of great importance in the pathology of pregnancy, are referable to three heads:

(1), to disturbances of the nervous system;

(2), to notable changes in the composition and quantity of the blood; and

(3), to the presence of albumen in the urine.

These three conditions then have to be considered in relation to the question of bloodletting.

DISTURBANCES OF THE NERVOUS SYSTEM.

To this condition must we attribute not only the extreme moral irritability which some pregnant women exhibit, but also a good share of those functional disorders which are so common, so intense, and so obstinate, and which have been so frequently attributed to plethora; as vertigo, loss or perversion of the senses, and disturbances of the circulatory, respiratory, or digestive functions, as shown by palpitations, syncope, vomiting, etc.

These generally disappear or become diminished with the progress of pregnancy in women whose nervous system has only become disturbed by the fact of the pregnancy itself; but it is otherwise with those in whom the pregnancy finds
this condition of the nervous system already acquired. This "nervous condition" has been laid down by Sandras as a formal contra-indication to bleeding, when it is unconnected with cerebral plethora, and the prohibition is justified by the close relationship which usually prevails between impoverishment of the blood and the production of nervous disorders. But in pregnancy the diminution of the globular element of the blood will not explain most of these nervous disturbances, inasmuch as these in general disappear before the blood has undergone any notable improvement in this respect.

The sympathetic excitement is in many cases the direct consequence of the irritable state of the uterus, and capable of relief by small general or by local bleeding. Moreover, the "nervous condition" is an unequivocal cause of uterine plethora. The women who menstruate most are not the strong and plethoric, but the nervous and delicate. Great care is indeed required in employing bloodletting in the nervous affections of pregnancy, especially towards the end of this, but when the state of the strength permits it the contra-indication must not be regarded as absolute.

**MODIFICATIONS IN THE COMPOSITION AND QUANTITY OF THE BLOOD.**

Modern researches have shown that—

1st. The globules diminish from the commencement to the end of pregnancy, their proportion rapidly decreasing from the seventh month.

2d. The fibrine, slightly diminished during the early months, is then increased somewhat to the seventh, becoming much augmented during the two last months.

3d. The albumen diminishes progressively, though only to a slight degree, throughout the whole of the pregnancy.

Although these modifications cannot be called pathological, yet is the relation which such blood bears to chloro-anæmia so strong as to lead to the same pathogenic character being attributed to the latter as formerly attached to plethora. M. Cazeau's views concerning the agency of chloro-anæmia are certainly too exclusive. The condition of the blood in pregnancy is, in fact, quite peculiar and special.

In some exceptional cases, the chloro-anæmia may prevail, but it is rather as a coincidence and exaggeration of a condition already present, than a consequence of the sympathetic reaction of the uterus. But true plethora may also prevail in women notably predisposed, or it may do so tem-
Bloodletting in Pregnancy.

porarily and at different stages of the pregnancy in those in whom it is only a result of the increased vitality dependent on pregnancy: and depletion requires to be used with more caution when plethora is a temporary, accidental condition, than when it is a habitual state, aggravated by pregnancy. Even in serous plethora, in which, with a diminution of globules, there may be a proportionate increase of serum, and in which ferruginous preparations may be called for, the mass of the blood being also augmented, careful depletion is not the less indicated. Mere mechanical plethora, determined by the pressure of the uterus during the latter months, may also call for palliative bleeding.

ALBUMINURIA.

Although pregnancy may run through its course quite uninterfered with when albuminuria is present, at other times it becomes a most grave complication, signalizing the production of sanguineous or serous congestions, which in a great number of cases are the point of departure of alarming accidents.

Bleeding may often be advantageously resorted to in order to ward off such consequences, when albuminous nephritis coincides with pregnancy, and when the condition of the urine, analogous to that observed in the anasarca consecutive to scarlatina, implies renal congestion.

Albuminuria, considered in itself, is most often connected with asthenia, and therefore bleeding is contra-indicated; but the peculiar conditions observed in the pregnant woman often compel practitioners to depart from this rule, no one hesitating, when uterine or cerebro-spinal congestions become menacing, to have recourse to this means.

In the sections on the inconveniences and dangers of bleeding in pregnancy, the author makes several quotations, in order to show that injudicious depletion during pregnancy, by impoverishing the blood, may give rise to abortion, and predispose to disease, especially to puerperal fever.

We pass on to the third portion of the work, treating of the particular circumstances which may call for bleeding.

1. BLEEDING IN THE DISEASES PROPER TO PREGNANCY.

As long as the exaggerated ideas concerning the plethora of pregnancy prevailed, bleeding was performed without any reserve in all diseases of pregnancy, and although any such excess would now be unjustifiable, yet does bleeding still constitute our principal mode of treating such affections. This arises from the fact that whenever they reach
a certain point, the usual result is the product of congestion.

The causes of the diseases of pregnancy are (a) the anatomical and functional changes in the uterine system, and the fluxion of which the pelvis is necessarily the seat during gestation; (b) the mechanical obstacle which the development of the uterus opposes to the free play of the organs; (c) the sympathetic reaction excited by the uterus in certain organs; and (d) the influence which the general modifications of the nervous system, the changed conditions of the blood, and the existence of albuminuria, exert upon the economy.

Any of these four causes may act in an isolated manner, but usually more than one act together, and concur in the production of the accidents. It would be difficult, therefore, to consider the diseases of pregnancy by distinguishing them according to the causes which give rise to them; and the author prefers dividing them into idiopathic and sympathetic diseases. The former have their seat in the uterus and pelvic organs, and are the result of anatomical and functional changes; and the others interest distant organs, being due to the reaction which the condition of the uterus exerts upon the entire economy.

**IDIOPATHIC AFFECTIONS.**

(a) *Uterine Plethora or Congestion.*—This may be sometimes dependent upon a state of general plethora, but it is oftener found in nervous, albuminuric, and hydropolyemic subjects. Not only does uterine plethora exert a great influence on the production of uterine haemorrhage and premature contractions, but it determines almost the entire pathology of the ovum, placental congestion and apoplexy being, in fact, intimately dependent on it. Although it may appear at any period, it is yet during the first half of pregnancy that it is most commonly met with. Bleeding is the treatment indicated, the amount of this being regulated by the nature of the cause giving rise to the plethora.

(b) *Haemorrhage.*—Is commonly a consequence of uterine plethora, and it should be treated by bleeding, when there is evidence of the permanent operation of an active cause, and especially during the first six months. At a later period greater circumspection is required.

(c) *Premature Contraction.*—Is a frequent consequence of congestion, and especially of haemorrhage, and bleeding is a powerful means of arresting it.

(d) Among other pathological conditions, *dropsy of the*
amnois and hydrorrhea admit only of bleeding when signs of congestion and plethora are present.

(c) Uterine Neuralgia—Is sometimes dependent on plethora.

(f) Uterine Rheumatism—Is usually best treated by depletion.

Passing on to the affections of other organs than the uterus, which arise from the physiological fluxion taking place towards the pelvis, we have congestion of the broad ligaments, which, although a rare affection, must still be borne in mind. The haemorrhagic molimen of the veins of the rectum, giving rise to haemorrhoids, may become an active cause of abortion. When connected with a state of plethora bleeding should be resorted to, while when the haemorrhoids are inflamed and painful, leeches may be safely applied, though they are often but of little use.

Cystitis is not a rare occurrence in pregnancy, and the softening of the pelvic ligaments, which is so constant an occurrence, may go on to a true inflammation.

SYMPATHETIC AFFECTIONS.

The great benefit derivable from blood-letting in the idiopathic affections of pregnancy is not obtained in the management of the sympathetic affections.

(a) Affections of the Breast.—Although it is rare for the changes which take place in this organ to assume a morbid character, yet in some instances a true phlegmasia may be developed, and depletion be called for.

(b) Disturbance of the Digestive Organs.—The stomach is the organ which, of all others, is most readily and most deeply influenced by the sympathetic reaction of the uterus. In the case of obstinate vomiting, in place of applying means after means to the stomach itself, our attention should often be turned to the uterus, whether for rectifying malposition or abating congestion and inflammation.

(c) Neuralgias.—The various forms of these (as cephalalgia, odontalgia, tic douloureux, vulvar pruritus, &c.,) to which pregnant women are liable, have almost ceased to be treated by bleeding since the time of Vallex; but that author attributed too much to the agency of asthenia in the production of these affections, for depletion may be advantageously used when the patient is not anaemic, and symptoms of general excitement are present.

(d) Vertigo and syncope should be treated by bleeding or not according to the nature of the cause which has produced them.
(c) Eclampsia.—Whatever difference of opinion may prevail with respect to the nature of this, all are pretty well agreed as to the necessity of bleeding; and not only is this required in the actual attack, but as a preventive, and especially when albuminuria is present or eclampsia has occurred in a former labor.

(f) Partial paralysis is sometimes observed towards the end of pregnancy, chiefly in primiparae. The causes are often obscure, though the affection usually seems connected with chloro-anemia, hyastasia, or albuminuria. It usually disappears of its own accord, and bleeding should not be resorted to except in the robust and plethoric.

(g) Disturbances of the respiratory and circulating organs.—The disturbance of respiration during the later months, is due to a mere mechanical cause, thrusting up the diaphragm; but when dyspnea is observed at an earlier period it may be due to the nervous condition or to congestion or oedema of the lung, and according to the nature and prevalence of these causes, the treatment with regard to bleeding must be regulated. In some cases palpitation of the heart is also due to local congestion, and may call for depletion; but such cases are rare. Cough, when dependent upon such condition, is best relieved by moderate depletion.

(h) Dropsy of the cellular tissue.—This is not always due to the obstacles offered to the venous circulation, or to the coexistence of a disease of the heart, and albuminuria must be taken into account, in consequence of the frequent occurrence of convulsions when it is present.

II. ON BLEEDING IN THE INTERCURRENT DISEASES OF PREGNANCY.

For the bulk of these the treatment differs but little from that which is proper in the non-pregnant condition. As a general rule, prudence in bleeding is advisable; but there are cases in which the greatest energy is alone sufficient, for not only may some of these affections exert an injurious effect upon the progress of gestation, but they themselves may be influenced by the changes incident upon the increase of size of the uterus. Expectation, which would be proper in the unimpregnated condition, may be misplaced here. The superabundance of fluids, or polyaemia, so frequently met with in pregnant women, should also be borne in mind as an additional reason for employing the lancet.

III. ON BLEEDING IN NARROW PELVIS.

The author agrees with M. Depaul, that in certain cases of narrow pelvis it is preferable to seek to diminish the size of the fetus by rigid diet and bleeding, to resorting to premature labor.
The diagnostic tube is nothing but a tube of vulcanized caoutchouc, very soft, of three-eighths of an inch in diameter, and about two feet long. One of its extremities, which is to be introduced into the auditory meatus of the patient, tapers off, while the other has the same diameter as the rest of the tube; this latter extremity, when placed in the auditory meatus of the physician, is retained there by its own elasticity. In order to ascertain the diseases of the middle chamber with the aid of this instrument, we must provide four catheters for the Eustachian tube, corresponding to numbers one, three, six and seven of the screw-plate of M. Charriere. Number one is so fine as not to permit the entrance of the point of a very fine pin into the orifice of its beak; number two corresponds to the normal diameter of the tube at its narrowest point; while numbers three and four have a wider calibre.

To proceed to the examination of the middle chamber, the physician introduces into his auditory meatus, say the left, the larger extremity of the tube, and into the right meatus of his patient, opposite which he places himself, the tapering extremity. If the tube is not retained by its own elasticity, it is held there by the patient, or by a third party; the catheter is then introduced into the right tube, and the physician makes an insufflation; the acoustic effects of this operation are transmitted with all their gradations of intensity or tone to the ear of the physician, exactly as if it were applied directly to that of the patient.

When we practice insufflation in a sustained manner, and with moderate force, with catheter number one, then, if the ear be sound, the air makes its way into the cavity as far as the tympanum, and we hear a continued blowing, soft and clear, like that we perceive if we blow into one of the extremities of the tube, the other being fixed in the meatus.

Whenever insufflation produces acoustic effects different from this, we must suspect that there exists an organic affection of the middle chamber, though the certainty of that proposition has not yet been submitted to the verification of autopsies. *Rales*, whether mucous or sonorous, (metallic?) indicate evidently either a mucous or sero-mucous secretion on the one hand, or, on the other, a total absence of secretion; if the stream of air which penetrates the middle chamber is very fine, and interrupted, the calibre
of the tube must be diminished; if the blowing sound, which denotes the penetration of the air, is wholly suppressed, the tube must be completely obstructed. In what follows, I shall often have to say, for the sake of brevity, the air penetrates the tube, etc.; it is sufficient that the reader is apprised, so as to avoid all misunderstanding.

In these researches it will be well to use at first catheter number three, to produce a current sufficiently energetic; if the air penetrates promptly and freely, we repeat the insufflation with catheter number two; then, if the result is the same, with number one.

So long as the air enters freely with this number, we are assured that there exists no obstacle, fixed or movable, in the middle chamber, and of course not in the Eustachian tube. When, on the other hand, the air does not penetrate at all, whatever be the catheter employed, we cause the patient to imitate the motions of deglutition, that the air may be pressed more powerfully from the side where the tube enters; if, then, no penetration takes place, it is certain that the tube is the seat of stricture very extensive and very resisting, or else that it is rendered impervious by adhesions; to decide which of these lesions we have to deal with, we must have recourse to catheterism with catgut.

In all the cases where the air does not penetrate, we hear a rustling, more or less distant, according as the obstacle is situated more or less distant from the membrana tympani; it is not always easy to distinguish this noise from the faint blowing which one hears when a column of air makes its way into the tube.

I have now for several years been applying this mode of investigation to a great number of diseases of the ear in which the tympanum was unaffected, and have never failed in such cases to meet with the symptoms of a catarrhal inflammation of the mucous membrane with superficial and interstitial exudation together; or exudation alternately free and interstitial, or with complete absence of secretion.

As the mucous membrane of the middle chamber and the Eustachian tube is entirely identical, we may expect this affection, when present, to invade it throughout its whole extent; it is especially in inflammation of that portion of the membrane which covers the fenestrum rotundum that derangements in hearing are to be calculated upon.

I have never yet determined infallible signs of phlegmonous inflammation of the middle chamber where the tympanum is not perforated. I must say the same of caries,
1860.]

Diseases of the Ear. 361

and other important degenerations. As regards anchylosis of the stapes, with atrophy and paralysis of the muscles which move the ossicles of the ear—affections, the very existence of which is as yet extremely problematical—it will not be possible to recognize them with the aid of diagnostic tube.

The causes of catarrhal inflammation of the middle chamber are chiefly cold, whether it acts exclusively on the organ of hearing, or whether its more general action on the system produces at the same time coryza, cough, catarrhal, gastric or other fever. The cold generally takes place as the effect of a current of air, or the penetration of cold water into the meatus, etc.

The progress of the affection is nearly always essentially chronic, rarely subacute. Exacerbations are common as the result of renewed cold, and especially in the course of febrile diseases; the aggravation of the catarrh of the chamber generally yields at the same time with the deranged condition which has occasioned it, but it as often happens that the deafness, the only subjective symptom of the diseases, is permanently aggravated at each exacerbation.

It is rare to observe the passage of one of the varieties above indicated into another; and there is perhaps no example of their becoming the origin of other affections of the ear, such as inflammation and ulceration of the membrana tympani.

The prognosis varies according to the anatomical characters; that form which is not accompanied with free exudation on the surface of the membrane is much easier to cure than that where the exudation is interstitial. In all cases it is upon local treatment that we have most to rely; even where the patient is affected with a manifest dyscrastic, general constitutional treatment, for the most part, exerts no sensible influence on catarrh of the middle chamber. It is only in very recent cases, of not more than a few weeks' duration, that staying in a heated atmosphere, free diaphoresis and revulsives can, by themselves, cure this affection, whatever may be its variety. Let us now separately study each of these varieties.

I. Catarrhal inflammation of the middle chamber, with free (superficial) exudation.

In practicing a strong insufflation with catheter number three, the air immediately penetrates, freely and without interruption, producing rales, more or less abundant. The
patients often experience a considerable shock during this operation; it is almost always followed immediately by a remarkable diminution of the deafness, and of the ringing in the ears, which frequently even disappear together.

This improvement ordinarily diminishes at the end of some hours, but by repeating the insufflation once or twice a day, we often obtain a cure after a longer or shorter period, and after frequent fluctuations for the better and worse. The mucous rale is the first of all the symptoms to disappear, then the insufflation may be freely made with the catheters, numbers one and two, which prove that the middle chamber is no longer the seat of any material obstacle.

In recent cases we often obtain a cure at the end of a few days. Old cases always demand treatment for three or four weeks, and almost always for longer. To anticipate relapses, we should always watch the condition of the ear during several weeks, or even months, after the cure, and, in case of need, have recourse from time to time to our insufflations.

In refractory cases it is advantageous, after having evacuated the mucous accumulations of the middle ear by insufflation, to inject into the Eustachian tubes, with the aid of catheter number one, some drops of a warm solution of gum; for that purpose we fill the catheter with the gummy solution, and stop its larger aperture; then we place the beak of the catheter in the Eustachian tube, we unstop the aperture, and practice a rapid insufflation, which makes the liquid penetrate into the chamber.

When relapse recurs several times, we inject by the same proceeding a dilute solution of the chlorohydrate of ammonia, ten or twenty centigrammes to thirty grammes of water, or of iodide of potassium, from twenty-five to fifty centigrammes with the thirty grammes of water. These means diminish pretty efficaciously the exaggerated mucous secretion.

In cases where inflammation is accompanied by fever, with severe lancinating pains in the ears, without the membrana tympani being affected, we prescribe repose in bed, and drop some warm olive oil into the meatus. When we have thus caused the pains to cease, we renew the insufflations.

It is advantageous to put the patient on meagre diet, and to keep the bowels open; we ought also to interdict them the use of cold lotions and baths. Any dyscrasies with which they may be affected have no connection of causality with catarrh of the middle chamber, yet it will be all the more necessary to combat them, after having obtained a
cure with topical applications, in order to provide against relapses.

II. Catarrhal inflammation of the middle chamber, with free and interstitial exudation. (Stricture of the Eustachian tube.)

The air, even when injected with force, only penetrates in small quantity, and most often not at all, unless the patient exercises at the same time the movements of deglutition; the blowing sound which it produces has, in addition, a moist character. Insufflation perceptibly diminishes the deafness and the ringing of the ears; sometimes, indeed, these symptoms entirely disappear for some hours. This improvement acquires a greater duration if the insufflations be frequently repeated, and especially in those cases where we practice injections of gum-water; the amendment is, moreover, much slower, but at the same time its progress is more regular than in the first variety.

In any case, we ought not to repeat the injections twice in one day, or we shall almost inevitably produce ringing in the ears, a sensation of fullness and heaviness in the head, agitation, etc.

There are cases where we are very soon enabled to introduce air freely with catheter number three or four, and where this insufflation produces a more marked improvement than under ordinary circumstances, but where this improvement is also much more transitory, not lasting longer than a quarter of an hour or a little more. In these cases the complete cure demands a much longer time, because the interstitial exudation predominates over the free exudation; the tube is then narrowed. We must, under these circumstances, allow an interval of more than twenty-four hours between the insufflations, and accompany them with the gum-water injections.

III. Catarrhal inflammation of the middle chamber, with interstitial exudation. (Stricture of the Eustachian tube.)

The air only penetrates when the insufflations are made with catheters numbers three and four, and even then the patient has to make the movements of deglutition; at the same time the penetration is always made in a very fine stream, and frequently in jerks, and so as to produce only a feeble sound; it always increases the tingling of the ears and the deafness, and after the insufflations the patients often experience a sensation of weight and fullness in the ear and the head. When the air does not penetrate at all into the chamber, we inject into it a drop of some inert
liquid, we hear a single isolated bubbling sound when this drop makes its way into the chamber. In cases where this injection is impossible, we must introduce into the tube, with the aid of catheter number two, a piece of catgut, to ascertain whether there exists or not an obstruction produced by adhesions. Cases sometimes occur where the tube is not obliterated, and where it is nevertheless impossible to introduce the cord.

The indication which naturally occurs to us in this variety is to aim at producing a resorption of the interstitial exudation; for this purpose iodine, mercury, Zittmann's decoction, Russian baths, thermal sulphur waters have been commended, also water treatment, applications of nitrate of silver or tincture of iodine to the pharynx or velum palati, but all these means are found unsuccessful except in very recent cases.

In inveterate cases energetic insufflations with catheters numbers three and four, ought to be avoided, in consequence of their irritating action, and we only have recourse to them at all for the purpose of ascertaining the progress of the cure. If we have to do with a young patient, provided the insufflation with catheter number three produces any perceptible sound during the movements of deglutition, we inject, with the aid of catheter number one, some drops of the solution of gum, of sal-ammoniac, or iodide of potassium. We must abandon those measures if they do not produce an improvement within two or three weeks. We must then introduce into the tube a piece of catgut with the aid of catheter number two, the extremity of which has been softened; we make it penetrate to the depth of an inch, and continue there for five minutes; we repeat this operation every day, or alternate it with injections as prescribed above. The results obtained by these means are not very brilliant, but I know of no other medication which gives more satisfactory results.

IV. Catarrhal inflammation of the mucous membrane of the middle chamber, with suspension of all secretion.

The air penetrates easily and freely, with a dry and clear sound, even with catheter number one, without improving the deafness or the sensations excited in the ear; these symptoms are sensibly aggravated when a strong insufflation is made with catheter number three; the patients then complain of a painful fullness in the ears.

We must, under these circumstances, seek to re-establish
the normal sero-mucous secretion; when this result is obtained, the blowing resumes its softer sound. The most efficacious means of doing this is the injection of a dilute solution of caustic potassa, (six drops of caustic ley with thirty grammes of water.) We make these injections with catheter number one; they ought not to be repeated every day, except in cases where they do not provoke or aggravate the sensation of fullness of the ear. When they do produce that result, we must wait before repeating them, until that symptom has disappeared.


The cause of this morbid process is still involved in much obscurity, notwithstanding the efforts of many experienced and qualified physicians. A long time may yet elapse, and many ingenious theories be conceived by anatomists and practitioners, before the true one is established. We are justified, therefore, in removing the discussion of this mysterious process, by making the following attempt at its explanation.

The characteristics of the croup-process are:

A. The fibro-albuminous exudation as a symptom of inflammation.

B. Paroxysms of suffocation terminating in death.

A. The fibro-albuminous exudation as a symptom of inflammation.

Under this head are to be considered the following points:

1. Are the symptoms of croup those of a genuine inflammation?
   a. From a clinical point of view.
   b. From an anatomico-pathological point of view.

For the sake of greater clearness, I may be permitted to compare the course of croupous pneumonia with laryngo-tracheal croup.

\[\text{CROUPOUS PNEUMONIA.}\]
High fever and symptoms of inflammation from the beginning.
Local pain, local burning heat upon the corresponding wall of the thorax.
Crackling and rattling respiration; sputa yellowish, afterwards inspissated.

With increasing illness the circumscribed redness of the face becomes darker, the skin drier, and the body hotter.

\[\text{LARYNGO-TRACHEAL CROUP.}\]
Fever and inflammatory symptoms are often absent in the beginning.
Seldom are there local pains—no heat of the larynx.
Sibilant respiration, bruit de drap; sputa always albuminous and coagulated.
Face always pale, except during the paroxysm of suffocation—the skin moderately warm, or cool and moist.
The mouth hot and dry.
Pulse hard and full.
Dyspnæa general, and gradually increasing.
Delirium.
After exudation the inflammation involves the adjoining or opposite parts.

The more abundant the exudation, the more violent the symptoms.

The termination is different, according to the severity of the disease. In most cases, it is in recovery, and but seldom in suppuration, gangrene, etc., etc.

b. From an anatomico-pathological point of view.

There is an abundant development of cells, a moderate exudation of fibrin and extravasation of blood.
The exudation undergoes metamorphosis.
The mucous membrane and the sub-mucous cellular tissue exhibit changes corresponding to the condition and course of the disease. Thus we find them dissolved, thickened, softened, hardened, suppurred, gangrenous, etc., etc.

From this comparison, it follows that laryngo-tracheal croup is, 1st. From its want of symptoms, not a genuine inflammatory disease. 2d. It is not a local disease, because the tissues of the larynx and trachea are not in the least changed by it.

We find, then, that the larynx is only the theatre or point where the disease exhibits itself, and the question now arises as to its proper seat. Is it in the blood? In severe and obstinate acute, as well as chronic diseases, it has been usual hitherto to attribute to the blood a peculiar morbid activity, producing, according to the process existing at the time, materies morbi, which, circulating, is at length thrown off with more or less disturbance in any predisposed locality, leaving the blood in a purified and restored condition. This doctrine of crasis or discrasia of the blood, which speaks of syphilitic, arthritic, or scrofulous ophthalmia as a syphilitic, arthritic, or scrofulous discrasia, and of croup and other inflammatory diseases as a fibrinous crasis or discrasia, etc., is now exploded.

The blood is the liquid life—that is, it contains all the
principal elements of the human organism, partly in a liquid and partly in a plastic state. But all its morphologic and amorphous parts are introduced into it, and are no more the product of its activity than gold is the product of gold-carrying rivers. The blood-corpuscles come from the liver and the spleen, the albumen from the lymphatic glands, and the salts are introduced by endosmosis. Vital force, then, may be wholly confined to the restoration of the stoechiometric or elemental relations of the organism, to the preservation of the crisis or constitution peculiar to the individual, and to the equalizing, by means of exosmosis and endosmosis, the unequal plus or minus existing at any time in these several respects. The blood, therefore, in its course merely receives and delivers. It may even receive obnoxious substances, which temporarily change its composition or partly destroy it, as, for instance, carbon; but it cannot produce or develop substances either good or bad; and so far as this is concerned, there can be no question about discrasia. The idea that the blood can produce materia morbi, to be ultimately deposited in some irritated or predisposed organ, must henceforth be given up. The blood can carry these morbid elements to any organ, but some other organ must previously have introduced them into the blood.

In regard to croup, therefore, it follows that the blood itself cannot form, but only convey to the larynx the morbid products peculiar to this disease, and that their origin must be sought for elsewhere than in the blood.

Now, since the albuminous material, the presence of which forms the most essential symptom of the croup-process, can be produced neither by the mucous membrane nor by the blood, the seat of the disease must be in those other organs which are constantly producing and restoring albumen to the blood.

The laboratory for albumen, both in health and disease, is the lymphatic glands. The opinion of physiologists, that albumen and fibrin are used in the organism in the same form as offered in alimentary substances, cannot, in the progress now making in chemistry and physiology, be long maintained.

The circulatory system, therefore, is simply a system of tubes, whose office is to distribute the blood-making elements introduced into them from without, which, entering into combination with various other ingredients of the food, become then qualified and capable for the maintenance of the individual organism. Doubtless human albumen is
more perfectly fitted for the construction of organs which are the media of thought, feeling, and will, than the albumen of plants.

The normal as well as abnormal production of albumen must, therefore, take place in the lymphatic glands, and in the case of croup especially, in those so largely distributed about the larynx and trachea; and the extensive network of lymphatic vessels with which these glands are connected supplies them constantly with fresh material.

Increased formation of albumen also takes place in pneumonia and other inflammatory diseases of the mucous membranes. The albuminous exudations of croup are distinguished from all similar ones, however, aside from their specific inherent qualities, by the fact that they do not undergo any decomposition, but are always expectorated, vomited, or evacuated unchanged and spontaneously, and without any oppression of breathing, if deposited, in the first instance, in bronchial tubes of the second size.

A state of increased productiveness on the part of an organ presupposes a state of irritation. Can this be proved true of the glands in the case of croup?

So far as regards the pathological anatomy of croup, the results are altogether negative. Barthé merely says, "that the bronchial glands are generally large and soft."

The proximate cause, however, of the irritation of the lymphatic glands is probably a miasm, having the same affinity to these that typhoid-miasm has to the abdominal glands. The glands receive the miasm in the first instance, are affected by it, react with increased energy, and pour out, with slight symptoms of local inflammation, their products upon the larynx and other organs. If asked, why to the larynx? we answer, that this organ, so prominent as an intermediate agent between the individual and the external world, is, at the age of from three to seven years, in full course of development, and consequently in a physiological state of excitement, and for that reason a point less likely than another to resist disease.

Cold, mechanical irritation, or chemical agencies, do not produce croup.

B. Paroxysms of suffocation terminating in death.

These have been quite ingeniously explained by referring them to the swelling of the mucous membrane, especially of the glottis, and to the diminution of the calibre of the trachea, from the exudation poured out upon its inner sur-
face. The following facts, however, are inconsistent with this explanation. Paroxysms of suffocation frequently appear before any cough is heard.

In simple laryngitis, swelling, croupy sound, and exudation appear without such attacks; they occur even when no false membranes can be detected during life, or found after death; or when such membranes are no longer found in the larynx, but in the deep-seated bronchial tubes only. They terminate without the exudation being removed; and finally, that in similar diseases, such as severe catarrhal inflammation of the lungs, extensive pneumonia, or pleuritic effusion, however severe may be the dyspnea, no paroxysms of suffocation appear.

Then another explanation was suggested. It was said that "the muscles of the larynx are infiltrated, edematous, and therefore unable to keep open the glottis." Aside from its incorrect physical basis, there should, according to this explanation, be no paroxysms at all, for the patient would be suffocated at the moment such infiltration occurred.

Thus, finally, croup is to be explained as something intermediate between the inflammatory and spasmodic diseases of the respiratory organs.

I consider the paroxysms as spasms, which are produced by the influence of the croup-miasm on the nerves of the neck, similarly to what we find occurring in the case of typhus.

That croup, however, is due to a miasm, is indicated by the following:

(a.) By the adynamic character of the reaction, as shown by the small, weak, and quick pulse; the somnolence; the contradictory nature of the symptoms, as shown by a cool, pale, moist skin, with absence of thirst, in a disease so severe and acute as this; from the fact that the longer the duration of the disease, the quicker become the movements and the clearer the sensorium; that sudden attacks of laryngeal breathing occur in the midst of the most perfect health; from the livid redness and gradual edema of the parts predisposed to exudation; that death occurs without much, and frequently without any, exudation.

(b.) Epidemics are caused always by a miasm. Sporadic croup, like sporadic typhus, is also a miasmatic disease.

From what has been said, it follows that croup is a miasmatic disease, involving primarily the lymphatic glands of
the respiratory organs, and localizing its products on the mucous membrane of such organs.

I may be permitted to add a few conclusions derived from experience.

1. That there exist family predispositions to croup; the disease affects lymphatic children.

2. Croup results as little from laryngeal catarrh as typhus from gastric fever. A catarrh may arouse, however, the predisposition to the miasm.

3. Emetics arrest croup if administered at the time of miasmatic infection; but can this time be ascertained with certainty?

4. There is no direct treatment of croup. We know neither the nature of the miasm, nor have we a specific antidote for it. The indirect method of cure consists in depressing the increased activity of the lymphatic glands. From the traditional treatment, with very rare exceptions, I have seen not the least benefit.

5. Emetics, as well as tracheotomy, fulfil only vital indications.

6. Depletion has just as limited an application as in typhus.

7. Cauterization can disturb the localization, and postpone, but cannot stop, the course of the disease.

8. In the milder forms of the disease, where the morbid process becomes speedily exhausted, the miasm being less concentrated, recovery may, but seldom does, take place.

9. As all miasmatic diseases may develop contagion, children should be kept from croup patients.

10. The fever is the only criterion of the course of the disease. As long as the pulse does not return to its normal standard, the prognosis is doubtful.—Translated for the American Medical Monthly, from Wiener Med. Wochenschrift, No. 31, 1859.

[Note.—Some errors, either of translation or typography, have evidently crept into the above article; we have corrected one by conjecture, but must leave others as we find them.—Eds. Nashville Med. Record.

A few particulars respecting Woorara.

M. Bonvier, relying upon a work published by M. Reynoso, gave, at a late meeting of the Surgical Society of Paris, the following particulars respecting the composition of woorara:
There is true and false woorara; the two are very different, but extremely difficult to distinguish from each other. The true woorara presents, moreover, several species. The substance is, therefore, not always obtained of the same strength; it comes from different countries, and is extracted from one or several plants, which contain one identical principle, the character of which is to cause death when injected into the blood, and to be innocuous when taken into the stomach.

There is, however, one sort of woorara which acts on the gastric mucous membrane of certain animals, at given ages: which circumstance would tend to show that much difference exists in some samples of woorara.

It is well known that it is not always prepared from the same plants, nor from plants of the same nature. It has even been shown by M. Chombrook, that one kind of woorara is obtained from a great number of plants, almost as great as the number of ingredients entering into diascordium or theriacum.

Amongst the plants used are some strychnine, but the rest has not as yet been determined botanically. It is doubtful whether snake poison is mixed with it.

Gunelli is the first who, in 1758, insisted upon the innocuous nature of woorara when taken into the stomach. Lacondamine and Humboldt corroborated his statements. Men can eat with impunity animals killed by woorara. Death by the poison occurs generally by paralysis of the motor nerves.

It is of importance to try the woorara in various manners before administering it to a patient, and to ascertain whether it produces no poisonous effects when introduced into the stomach, and also whether it paralyses motor nerves without affecting the nerves of sensibility. These precautions are indispensable, for there is a kind of woorara which may kill by gastric absorption.

As to the occasional inefficacy of the poison when inoculated, the experiment of M. Dequise may be mentioned. This surgeon had been given, by a traveller, a quiver full of arrows, said to be poisoned with woorara. He found, however, on trying them upon a dog, that they produced no effect. If we consider the woorara as an extract, such a result need create no surprise, as extracts are very liable to change.
Leucocythaemia. [Translated for the Boston Medical and Surgical Journal from No. 29 of the Allgemeine Wiener Zeitung, for 1858.] By B. Joy Jeffries, M. D.

Enlargement of the Spleen and Liver; Increase of the number of White Corpuscles during Life.

Elizabeth Hallwachs, æt. 45, Catholic, midwife, from Grinsing, mother of five children, (the youngest being now 18 months old) had always been healthy. In August of last year she was for the first time attacked with chills, without being able to recall any exciting cause. Two days later, at about the same hour, she had a similar attack. Fourteen days afterwards, there was a recurrence of the chills for eight days, in daily returning paroxysms.

The patient first noticed at this time, in the left hypo-chondriac region, a tumor which was not painful, and of considerable size (according to her statement about that of the fist). It was therefore of some size before discovered by her.

Since January of this year the patient had had pain in this tumor, which had become as large as an infant's head, and had lost, as she thought, its mobility.

During February and March, she was quite comfortable for six weeks. But after this the chills returned with greater frequency, and the pain in the tumor became more severe, particularly after the fever turns; so that, March 22d, she appeared as an out-door patient on Prof. Oppolzer's clinic. There was at this time a tumor that reached inwards as far as the navel, and downwards to within three inches of the symphysis pubis. It evidently belonged to the spleen, and the patient was ordered quinine.

Since then, however, the chills and fever returned daily, and were increasing in intensity and duration. The attacks that at first only appeared once, now came thrice, and even four times during the day, and began to lose their typical character. The patient had, at the same time, constant diarrhoea, with pain at stool. She also lost her appetite, and had a "bronchial catarrh," with purulent sputa.

She accordingly entered the Hospital April 1st, when her condition was as follows:

Body of medium height; muscular system feebly developed; skin of a pale brown color; eyes sunken, sclerotica not yellow, the vessels moderately injected; forehead had the so-called "chloasma uterinum;" tongue dry, white coat on its edges. The jugular veins strongly dilated with blood,
and plainly undulating even during the intermissions of fever; no murmur in them. Carotids strongly pulsating. Glands of the throat and neck slightly enlarged. Formation of the chest normal; the breasts still swollen and hard (the patient had only a short time previously weaned her child).

Examination of the chest gave the following physical signs:

In the right axillary line, dullness from the eighth rib downwards; in the mammillary line, from the sixth rib, and in the parasternal line the same to the ensiform cartilage of the sternum. In the left parasternal line, dullness from the upper edge of the third down to the sixth rib, and from here downwards tympanitic. In the mammillary and axillary lines, dullness from the under edge of the seventh rib downwards. Impulse of the heart between the fifth and sixth ribs—plainest in the parasternal line. Heart's sounds normal; second sound over the pulmonary artery, not much accentuated; first sound over the aorta, dull; second, loud. Dullness over the liver reaches in the mammillary line from the sixth rib to an inch and a half below the edge of the ribs; in the axillary line, it begins at the eighth rib. In the median line, the left lobe of the liver reaches from the sixth rib to an inch below the xiphoid cartilage. Enlargement of the liver is therefore evident. Its right lobe extends lower than the left. On the left, the dullness over the liver is separated from that of the region under the ribs by a small intervening tympanitic space. Percussion in the right inguinal region, clear and full. Dullness from fecal masses, to a slight extent, over the crest of the ileum. Liver not sensitive to pressure.

As was said above, the dullness begins on the left side at the under edge of the seventh rib. This is also the upper edge of the tumor now to be described. This tumor extends furthest towards the right side below the navel, i. e., to the outer edge of the right recti muscles. At the navel it projects an inch beyond the median line; above the navel, to the median line; five inches under the navel, one inch over the median line. So that the tumor has a periphery convex towards the right side. Posteriorly, it reaches to within two inches of the vertebral column. Its inferior edge is bounded in the iliac region by the crest of the ileum; further forwards by Poupart's ligament. In the median line, it reaches to within an inch of the symphysis pubis. The superior border of the tumor can only be determined by
Leucocytæmia.

perfusion; its other limits by palpitation also. Over the tumor percussion is flat; on its edges, slightly resonant and tympanitic; in the neighborhood clear and tympanitic. The tumor is therefore surrounded with organs holding air. The surface of the tumor is even, and its consistence hard and uniform. The lower edge is blunt; the right edge has six perceptible notches, the deepest one (which is two inches) lying under the navel. No perceptible fluctuation over the tumor. Its elasticity but slight. The tumor can be moved within certain limits from one side to the other, and also upwards and downwards. Its position changes with that of the patient. During inspiration, it falls somewhat lower. In the region of the tumor, and especially towards its pos-
terior border, the patient has continuous, severe, burning, and lancinating pains, even when she is quiet and has no fever. Lying on the right side decidedly increases the pain. The attacks of fever commence with coldness of the lower extremities, creeping upwards as far as the arms, and then changing to heat and burning thirst. These now (at the
time of her reception) come on three or four times during the day. At these times the pain greatly increases, especially during the cold stage.

The inguinal glands are somewhat swollen. The pulse, during the fever, 128; between times 84, soft and full. Dejections, since a few days, normal. Secretion of urine not altered. Urine of normal specific gravity, rich in uric acid, and holding a trace of albumen. The digestion, during the intermissions of the fever, not much disturbed.

An examination of the blood, taken by a local venesec-
tion, (ordered by Prof. Oppolzer on account of the enlarge-
ment of spleen and the fever) showed a relative increase of
the white corpuscles. On coagulating, the blood formed a
large white clot, under which were white granules the size
of a millet or hemp seed, round, and streaked in appear-
ance, composed, under the microscope, of white blood cor-
puscles rolled together. There was, in addition, also a
large red clot. We had, therefore, blood, leukæmic to a
small degree.

The following comprise the data from Prof. Oppolzer for
the diagnosis of the case.

1. As regards the tumor in the left hypochondrium of the
patient, it answers to the greatly enlarged and hardened
spleen, which is shown by its position, its surroundings, the
percussion, its movement during inspiration, absence of fluc-
tuation, and the peculiar notches on its inner (anterior) edge.
We have here, therefore, a splenic tumor, and, moreover, that form which occurs with leukaemic blood.

The enlargement of the spleen in our case is a chronic one, as shown by the duration of the disease, the great increase of size of spleen, and, finally, the absence of any injury, pyaemia, or inflammation in the heart, as primary lesions.

Of chronic splenic tumors, are to be excluded the lardaceous and colloid forms, such as accompany constitutional syphilis, the mercurial cachexia, rachitis, scrofula, &c., and which are generally associated with colloid degeneration of the liver and kidneys or albuminuria.

The "pigment spleen," after intermittent, has as little connection with a decided increase of the white corpuscles as the lardaceous degeneration. This leukaemic condition of the blood corresponds more to Virchow's so called chronic splenitis. Anatomically a "flesh spleen" (Fleischmilz), as a result of Virchow's "parenchymatous inflammation," where the capsule is thickened, the trabecular tissue hypertrophied, the intervening pulp hard, the parenchyma-cells in large numbers, and in many cases yellowish or reddish-brown formations. In all probability we have such a tumor as this in our case.

The question whether the leukaemic splenitis is in fact very different from the splenic tumor of intermittent (since the clinical course of the two diseases are in many respects similar), may be so answered. An increase of the white corpuscles of the blood occurs in intermittent, and also in typhus, pneumonia, during pregnancy, in the puerperal state, in tuberculosis, with cancer, in anaemia and inanition. But in these diseases the leukaemia is only small in amount, disappears again, and the patients convalesce. If leukaemia was identical with intermittent, patients with the latter, living in the malarious regions, and having enormous enlargement of the spleen, would exhibit a decided increase of leukaemic blood and all the peculiar lienteric symptoms of the disease.

Enlargement of the liver is very often associated with chronic splenitis, and Virchow mentions having found white corpuscles in the liver, which appeared precisely similar to the corpuscles of the spleen. In our case, also, there is enlargement of the liver.

2. The presence of leukaemic blood must be proved, in order to confirm the diagnosis.

In the first place, it is to be remembered that leukaemic
blood may be confounded with that of lipæmia, and, moreover, the character of the blood corpuscles may be altered by an increase of their coloring matter—*melanæmia*.

As regards lipæmia, the milk-white color of the serum of the blood is here occasioned by its richness in fat. If we shake up the serum with ether, the fat will be freed, which will not, therefore, be the case when the white color is dependent upon the presence of white corpuscles. Lipæmic blood occurs especially in hard drinkers, in pregnant women, and those in the puerperal state.

Our patient's blood was not lipæmic, but leukæmic. Its redness was caused by there still being a large number of red corpuscles present. (Their decrease is the principal characteristic of leukæmia.) Purely white blood has only been seen at *post mortem*; during life its color is generally only somewhat brighter, like raspberry syrup, and in the severest forms grayish red.

The diagnosis founded on the two points above mentioned was confirmed by the further progress of the disease, as will be seen further on.

As regards the character and form of the disease, it must be first said that the leukæmia is only to be considered a symptom. In the beginning of chronic inflammation of the spleen it is but slight, as was very markedly the case with our patient. Virchow records several cases in which, in spite of the size of the splenic tumor, there was at first no leukæmia, and where it did not appear until after several months.

Leukæmia is therefore a secondary appearance, that occurs with splenic tumors, and (which was not previously mentioned) with diseases of the lymphatic glands.

In the four cases that Prof. Oppolzer has seen up to this time, the lymphatic glandular system was but once the starting point of the disease, in which case all the glands of the body were considerably swollen, but also elastic, having the feel of lipoma, particularly on the neck. These tumors developed by sudden enlargements, without any particular pain, and whilst the other functions of the body were normal, notwithstanding the paleness and emaciation. The symptoms of leukæmia afterwards showed themselves in their fullest extent, and the patient succumbed to the disease.

Lately some cases have been seen, where cancer was mentioned as the cause of leukæmia. In one of Heschi's there was degeneration of the lymphatic glands, and in
some other cases of English observers neither the spleen nor the glands are said to have been affected.

Before Virchow introduced the leukæmia into science, similar cases were explained as pyæmia. Nevertheless, Bennett, who introduced the name of leukoeythæmia (which has now, and, in fact, with better right, spread abroad as polyleukoeæhmia), has endeavored to defend his right of priority.

No satisfactory explanation of leukæmia exists as yet, because the formation and degeneration of the blood corpuscles, and the part which the spleen and lymphatic glands play in this, is not at all settled.

If we lay stress only on the increase of the white corpuscles, all attempts to explain the difficulty of breathing, the loss of muscular power, in short the chlorotic appearances, are useless. The diminution of the red corpuscles must also be explained, which has not yet been done by the vaguest hypothesis, although the increase of the white corpuscles has been said to be caused by those in the spleen passing into the stream of the blood.

The distinction that has been made between the white corpuscles and pus corpuscles amounts to nothing, when we remember that the size of cells suspended in a fluid depends upon the density of that fluid, and that the (larger) pus cells are floating in a thinner medium than the white blood corpuscles; and, moreover, that we have different formative cells before us, which would, naturally in some measure differ from each other in appearance.

The same applies to the corpuscles in the lymphatic glands when compared with those in the spleen.

The viscid character of the corpuscles, and their rolling and sticking together so easily, would explain why in leukæmia the capillaries are so readily plugged up and metastases follow in the later stages of the disease.

There is no ground here, however, for the theory of those who would assume a plugging up of the capillaries of the lungs with pus in pyæmia.

As to the causes of leukæmia, there is but one thing yet ascertained, namely, that in the cases that have occurred with women there was derangement of the menstruation, and that the disease was developed during the puerperal state; as was also the case with our patient.

One of Prof. Oppolzer's cases was a day laborer, who worked as a digger in a marshy place. Without having had any intermittent, he suffered from a splenic tumor, dropsy,
Leucocytæmia. [May,

and nasal hæmorrhage, of which latter trouble he finally died through anæmia. The other cases were of no particular ætiological interest.

Leukaemia has been seen at different periods of life, in both sexes, and with various constitutions. Intermittent fever is rarely a cause of the chronic splenitis in Virchow's acceptation.

The appearances in the disease are not yet sufficiently classified to establish its symptomatology. A variety of symptoms have been ascribed, which in fact are really not peculiar to it.

The color of the skin in most of the cases was pale, with a shade of yellow, as there was generally enlargement of the liver.

In all cases Prof. Oppolzer observed pain in the spleen, with the exception of the leukæmia above spoken of, which was accompanied by affections of the lymphatic glands. The pain came on at intervals, accompanying an increase of the fever, as in our case.

The principal symptom is the fever, which has a typical course, is accompanied with heat and chill, irregular in its duration and times of returning, appears on an increase of the pain, and is not generally much improved by quinine. There is generally emaciation during the later stages. The debility which is so constantly present, just as in chlorosis, may depend, like the difficulty of breathing and the mental depression, upon the diminution of the red corpuscles.

The augmented accumulation of white corpuscles may cause in the later stages great difficulties in the circulation, inflammation and metastases. Hence came the idea of regarding the disease as pyæmia. In this view the most common occurrences are thrombus in the vessels, with phlegmasia, bleeding from various membranes, particularly of the nose, even to complete exhaustion, peritonitis, pneumonia (in one case of Prof. Oppolzer), formation of absceses in the skin, furuncles, carbuncles, &c. Dropsy occasionally occurs, but it seems generally to be produced by the splenic tumor. It is by no means constant. Alterations in the digestive tract are not very marked, or at least do not seem to be immediately connected with the disease in the blood. For example, when our patient was troubled with diarrhœa, the leukæmia was certainly still very inconsiderable. The urine held a good deal of the urates, and afterwards free uric acid, which is especially connected with
the disease of the spleen, for this formation of uric acid occurs also in intermittent fever.

The "key-stone," however, is generally the hectic fever, with a fatal termination, or death is caused by one of the above mentioned secondary appearances.

The prognosis is most unfavorable. At least no case of lienteric leukaemia has as yet been seen that was not fatal. The other form has not been often enough observed to decide this point as respects it, still the termination has always been fatal. Our treatment can therefore only be directed to the symptoms, since we do not know the nature or exciting cause of the disease.

The few therapeutical deductions from the previous cases which are applicable to leukaemia, will be spoken of in their application to our case.

The following was the course of the disease with our patient:—

When she entered the hospital, a few leeches were applied over the spleen, without relieving the pain in the slightest. Sulphate of quinine was ordered at the same time, also without much effect, for on the 4th of April, when the patient had already taken forty-two grains of quinine, the attacks of fever were still very severe, and one that begun at 3 o'clock, P. M., lasted till the next morning. The condition of the patient, aside from the fever turns and pains in the spleen, was satisfactory. The bronchial catarrh that had for a long time troubled her, entirely disappeared, the diarrhœa had yielded to treatment, and the appetite was pretty good. The fever paroxysms and severe pain lasted in spite of the quinine. The leeches and warm applications were repeated, and continued up to the 9th.

Examination of the blood during this time, showed a continued increase of the white corpuscles.

On the 8th and 9th, the patient, under the use of quinine, had no chills, but they returned on the 10th, and lasted an hour and a half. On this day Fowler's solution was given, in order to allay the feverish symptoms.

A physical examination, on the 19th, showed a new enlargement of the spleen. The digestion still good, dejections somewhat loose. Urine held urates, but not so much as at the commencement. A trace of albumen was present. On the 20th, the patient again had fever, from which she had been free for two days. Resort was therefore again had to quinine, and large doses of it finally prevented the parox-
ysms of fever from returning so often, and the pain was entirely relieved for a time.

This relatively favorable condition lasted till the beginning of May, when, without any apparent cause, the paroxysms of fever returned with still severer pain. At the same time the patient had oppression at the chest, diarrhoea, and the dejections were mixed with mucus and epithelium. The salicin, of which she took two scruples, had no effect. On the 9th of May, leeches and quinine were again ordered.

On the 18th, after four days' relief, the patient was again attacked with high fever and severe pain in the hypochondrium, and with this, headache, diarrhoea and strangury. In the intermissions, pulse 100. Frictions of spiritus saponatus were used, and extract of colombo, with tannin, given to check the diarrhoea.

The patient went on in this way, her condition sometimes made worse by the fever and pain in the spleen, the diarrhoea and loss of appetite, and sometimes better by the remission of the fever, especially after the use of Peruvian bark, which often was effectual for some time together.

On the 7th of July, the patient complained for the first time of pain in the thighs. Coagulation of blood was discovered partly in the deep and partly in the superficial veins, especially on the left leg. A hard cord was felt on the inner side of the left thigh, and a reddened streak over it. The same sort of cord was felt under Poupart's ligament.

There was oedema in the neighborhood, and the skin was red. These coagula corresponded to the saphena vein, but as that alone would not explain the interruption to the circulation, the crural vein must also have been affected. The patient felt very weak, complained continually of severe pain in the foot; the pulse was quick (120) and small; and the appetite quite gone. Cold applications of Goulard's lotion were made to the foot, strong doses of morphia given internally, and the leg raised.

On the 8th and 9th (July) this condition continued, the oedema having somewhat decreased, however. No metastases to be found. Lately the urine has held a great deal of the urates. The blood has been comparatively richer in white corpuscles. The sleep bad—the pain insupportable. The cold applications were continued, and also morphia, in stronger doses (½ gr). This condition lasted, with slight intermissions, till the 13th.

On the 13th, the patient looked cadaverous, was very
Extroversion of the Bladder.

1860.

Emaciated and extremely weak. Splenic tumor not very sensitive. No chills. Less pain in foot. Less edema. The corded feeling of the vessels still perceptible. Pulse frequent (100), intermitting, small. Metastases or bleeding have not occurred. Urine rich in urates, thick, cloudy, pale brown. Lacteearium was given as a narcotic. After a short agony, death followed on the evening of the 14th.

As regards the therapy, we may gather from the course and progress of the disease, that of all the remedies used to allay the fever and relieve the pain in the spleen, quinine and cortex Peruvianus alone were of service, and only in a certain degree. Narcotics, bleeding, &c., were in this case almost of no service. Whether the use of the Carls baths, Marien baths, or the waters of Kissing would be advantageous in the beginning of leukeremia, is doubtful. Hardly any other opinion could be held respecting the effects of moxie, acupuncture and similar procedures in use among the natives of the East.

Extract from the Records of the Boston Society for Medical Improvement. By Francis Minot, M. D., Secretary.

Extroversion of the Bladder.—Dr. Jackson reported the case, which he had recently seen, and which resembled essentially, that of the man (Hayden) who has so often exhibited himself here, and whose condition has been fully described by Prof. L. A. Dugas, with general remarks upon extroversion, in the Southern Medical and Surgical Journal, for April, 1840. The subject of the present case was a healthy, intelligent Irish journeyman cabinet maker, from Brooklyn, N. Y.; forty years of age, but looked ten years younger. The mucous surface of the bladder was covered to a considerable extent by a very thin cuticle. No trace of navel. Hernia on each side. Ends of pelvic bones indistinctly felt. Testicles in the scrotum. The glans penis has a bilobed look, as usual; and being separated from the bladder by slight pressure, as the man lay upon his back in a strong sun-light, something like a caput gallinaginis could be seen, with the openings of ducts upon each side. Prepuce well developed, and the prepuce in accordance with the glans. The man says that, so far as he knows, his sexual feelings are as strong as those of any man, that he occasionally has a seminal discharge, and "can draw it."
Carbonate of Lithia in Gout.

Experience has taught that, in the great majority of cases, new remedies fail to answer the expectations, not only of those who first advocate their use, but still less of others who have no personal interest in their success. Yet we are bound to lend an unprejudiced ear to any suggestion which comes from one, whose name is associated with honest and successful labor in the investigation of disease.

These considerations lead us to call attention to the use of a new remedy proposed by Dr. Garrod, in his work on Gout and Rheumatic Gout, a notice of which we find in the *Lancet* for December 24, 1859. As the author's views of the pathology of the disease have an important bearing upon the treatment, we give some of them here. He says, "there can be no doubt that the essential component in gout deposits its urate of soda, which always assumes a crystalline form." This he considers a pathognomonic lesion, as it is not noticed after rheumatic or any other inflammation, and was invariably found in the numerous examinations of patients who had had the disease in all its forms. In continuation, he says:—

"Other matters are, indeed, often present, in varying quantities, derived from the tissue in which the deposition has taken place; but the large amount of phosphate of lime which is occasionally met with, is probably derived from secondary deposition, from the urate of soda acting as a foreign body, and producing ordinary inflammation; and thus, as in the case of the formation of cretaceous tubercles in the lungs and elsewhere, giving rise to phosphatic exudation, which must be regarded, not as related to the disease as gout, but as the result of common inflammation only."

In connection with this, the results of Dr. Garrod's analysis of the blood, as given by the reviewer, are interesting, showing, as they do, that the

"Healthy blood contains the merest trace of uric acid or acid of urea, so small as to be in general undiscoverable, except by the most minute and searching chemical examination, and not always then.

"That, in gout, the blood is invariably rich in uric acid, which exists in the state of urate of soda, and can be separated from it, either in the form of the crystalline salt in acicular needles, or as rhombic crystals of uric acid.

"That, in acute rheumatism, the blood is free from uric acid, or at least contains no more than in health."
"That the serum obtained by the action of an ordinary blister yields uric acid when the blood is rich in this principle, except when the blister is applied to a surface affected with gouty inflammation.

"That the perspiration seldom contains uric acid; but that, in gout, oxalate of lime may be crystallized from it, as also from the blood."

"The urine," we are told, "in the earlier stages of gout is scanty, and the uric acid, measured by the twenty-four hours' excretion, also diminished; that this acid is thrown out in much larger quantities as the disease is passing off, and that then amounts even far above the patient's daily average may be excreted."

In the chronic stage, the quantity of uric acid excreted becomes still smaller.

The treatment which the author considers the most advisable, is the following:

"The diet should be very light, and chiefly amylaceous; diluents freely used, but no alcoholic stimulants allowed, unless in exceptional cases. The medicinal treatment should consist in the administration of some simple alkaline saline, combined with a moderate dose of colchicum; if necessary, purgatives may be given, selected according to the habit and condition of the patient. In the majority of cases, this will be found to be all that is necessary; but in some instances certain modifications may be essential; for example, if there be plethora, the question of the abstraction of a few ounces of blood may possibly arise; and, on the other hand, if the vital powers are at a low ebb, and great vascular and nervous depression exists, ammonia, in the form of the sesquicarbonate, may be desirable, in addition to, or as a substitute for, other salines; at the same time, colchicum should be altogether omitted, or used with the greatest caution. The only application required, in the majority of cases, is cotton wool covered lightly with oiled silk, which forms a protection to the joint; but now and then an anodyne may be advantageously used, and a small blister is occasionally of service."

In chronic forms of gout, Dr. Garrod considers that the following are the indications necessary to be fulfilled:

"First, to treat the chronic forms of gout by less heroic means than those employed in the acute disorder.

"Secondly, to render the blood pure by augmenting the various secreting functions, more especially of the kidneys and skin."
"Thirdly, to restore the power of the digestive organs, which are usually much impaired in chronic gout.

"Fourthly, to attend to the local mischief which the long-continued gouty inflammation induces in the articular structure.

"And, lastly, to carefully regulate the diet, and pay proper attention to regimenal means."

In conclusion, he proposes, as a new remedy, the carbonate of lithia, which possesses a very remarkable property, "that of forming the most soluble salt of uric acid known." As this is rare, we give the following facts concerning it, for which we are indebted to Mr. Blackmore. Lithium exists only in a few minerals, the most common of which are spodumene, found at Killiney, near Dublin, Ireland, and lepidolite, a Swedish mineral. This metalloid is white, like sodium, and becomes oxidized immediately on exposure to the air. The mineral waters of Pyrmont, in Germany, contain, in 16 ounces, 0.0030 grains of carbonate of lithia; those of Mariensbad, 0.0675 in the same quantity; those of Achen, 0.0006; and those of Winterbach, 0.0030 of sulphate of lithia. These springs have, for many years, been regarded as peculiarly efficacious in this class of affections.

Stomatitis Materna. By L. S. Ellis, M. D., Chicago, Ill.

This disease has, of late, elicited much attention from the medical profession. Its severity and obstinacy have been not a little magnified; its pathology pushed far into the mysterious; its treatment as varied as speculation, and speculation verged near upon absurdity. It has been represented as a new disease, which the oldest practitioners "have never yet met with," and a recent writer "could not find a single reference to this disease in any of the works of Practice, or Special Diseases of Females."

Dr. Dunglison, in his Practice, printed in 1842, vol. 1, p. 31, says: "It is not common with us, but it is said to be very often met with in moist countries, as in Holland, where it reigns at times epidemically, and is a serious affection, attacking adults, and child-bed females especially." Again, on p. 32, "the author has observed some obstinate cases in women who were nursing, the affection appearing to be induced by the constant drain from the mother interfering with nutrition."
In Bell & Stokes' Practice, 1845, I find, "There is yet a kind of sore mouth, which, as far as our present knowledge extends, is seen only in women during lactation." Vol. 1, page 52.

Dr. Wood gives the disease an extended review, as the relative importance of the disease demands.

The medical literature of this malady is more abundant, and in our country, extends back at least thirty years. I have not yet seen any such evidence as to induce me to believe that the disease is of modern date. The great source of modern improvement in medicine consists in a more accurate isolation and discrimination of particular disease. This accurate discrimination of disease alike tends to the advancement of our profession, and to individual success. In many cases what were considered symptoms by old authors, are now exalted into the ranks of distinct diseases. Also, by reference to authors as old as Cullen, we find whole groups of distinct diseases grouped under one head or class, determined by locality. Thus, under the title of Hepatitis, Cullen gives but three pages to diseases of the liver. While thus he makes no mention of such diseases as *fatty degeneration* or *cirrhosis*, no one will claim that such maladies had no existence in his time. I believe that wherever a like combination of influences exists, there like consequences will follow.

Views of the pathology of this disease are as adverse as the localities of the authors. A recent writer says, "In all these cases I have seen inflammation of the cervix uteri and of the superior portion of the vagina." Another finds the *causa belli* in "miasmata," in "biliary derangement," and in "the influence of gestation and lactation." Another dives deep into that medical arcana, the blood. That inner temple of mysteries holds a wondrous amount of vagaries, whose warrings, if visible, would reveal to us a terrible pandemonium in that "liquid flesh" of ours.

The most positive testimony exists as to the unlimited extent of the prevalence of the disease. Proof is as abundant as of any disease whose history has been so recently written. None will doubt its existence in Illinois. Prof. M. M. Pallen speaks of it in Missouri; Dr. Shanks in Tennessee; Dr. Brandon in Georgia; Dr. Armor in Ohio; Dr. Dunglison in Pennsylvania; Dr. Backus in New York; Dr. Hale in Massachusetts; Dr. Marshall Hall in England; M. Guersent in France and in Holland. Names could be cited by scores, showing that the disease is not confined to mala-
Stomatitis Materna.

...rious districts of our country. It occurs alike on the mountains of New England and New York, as well as on the prairies of Illinois. It exists in England, where Dr. Watson says, "Intermittent fever is known to us only in its group of symptoms." Likewise on the continent its existence with malaria exclusively is without proof. Before we accept this dogma of its malarious relation, we ought certainly to have some positive proof of its obeying malarial laws; proof that it occurs in greatest extent and severity at the same seasons; decreases in cities; vanishes with the settlement and cultivation of our country, instead of with the "early healthy physical development of the daughter." On the contrary, I have observed it at all seasons, following not in the channel or seasons of epidemic malaria, but after fortuitous occurrences with those whose idiosyncracies predispose to it.

As before intimated, the blood has been obliged to assume the burden and responsibility of this disease. As a scapegoat of physical aberration, it has borne, not only the disease in its obscurity, but its task-masters into still greater mysticism. In this connection I cannot forbear quoting from a recently promulgated theory, especially illuminating:

"Of its dependence upon the depravity of the blood, I have no doubt. I consider the health of this vital fluid dependent upon the harmonious action of all the assimilative organs of the body, and a due supply of pabulum of proper blood food.

"If any one of the tissues fail to be nourished by an error of nutrition, I think the elements of that tissue remain as abnormal constituents of the blood; and that the elimination of those particular elements by their natural elective power, alone can render it normal for the production of the other tissues.

"The development of hair upon the foetus in utero, is in obedience, I think, with this general law. We know of no other physiological utility, as it almost always, very soon after birth, gives place to a reproduction. If its elementary constituents are eliminated in the progress of foetal development, that the blood, after this assimilation, might be in its integrity for a second assimilation to nourish another tissue; and the succession of these assimilations maintain not only the proper constituents, but the constant normal catalysis of the blood, then we see how necessary are the development of all the uses in utero, as well as after birth. And the development of rudimentary structures in the one sex when the
requirements of organs are confined to the other, as in case of the mammary gland, etc."

To know what the above means, what are its relations to Stomatitis Materna, and how it proves it a blood disease, the inquirer must refer to Trans. Ill. State Med. Society, 1859, p. 48, et. seq.

Is it "a blood disease?" If so, where is the proof? Do the speculations of writers make any approximation to proof? Does the successful therapeutic management of the disease, even by such theorists themselves, afford any support to their theories? If any knowledge of practical value is to result from theory, it seems it ought, in some manner, to be supported by microscopical investigations, correlative symptoms, and therapeutical applications. Dyspepsia may be accompanied by a "paucity of blood corpuscles." Is it, therefore, a blood disease? Prolonged lactation will favor "impoverishment of blood, impair nervous agency, and derange the secretions." Is it a blood disease? Why not come to the obvious and palpable conclusion, that the stomach is primarily at fault—that the "impoverished blood," the "deranged biliary secretions," the "constipated bowels," the "irritated stomach," the "acid urine and saliva," and the ulcerated tongue, are but symptoms of the central derangement—are but indices of impaired digestion, not in the nursing woman alone, but in the dyspeptic man and child.

In all cases falling under my notice, I have found evidence of impaired function of the stomach. This will be found a leading characteristic of the malady if attention is directed to it. These functional derangements do not follow as a sequence of the stomatitis, but are found to precede it in many cases a long time. Women who have had this disease many times, learn by experience to avoid indigestible substances, especially such as induce acidity of the stomach. I have observed connected with this disease, loss of appetite and taste, acidity of stomach, gastric uneasiness after eating, constipation or diarrhoea, persistent or alternating, biliary derangement, &c. Following these as a sequence in long continued cases, comes in a long train of "diminution of blood corpuscles," "anemia," "land scurvy," "modification of condition of blood," &c., of various authors.

Rapid decay of the teeth is also apt to occur in this train of symptoms; a circumstance I have always referred to the acid secretion acting on the teeth. Herein is the explana-
tion of so many American women losing their teeth, especially in the first lactation. This seems to me to be as much entitled to a place in the category of blood diseases as Stomatitis Materna. If the above described condition of the stomach continues unabated, the decay of the teeth is almost sure to occur, more sure than the disease under consideration.

I am not alone in this mention of gastric derangement. Dr. Dunglison, in his Practice, vol. 1, p. 31, says: "This form is accompanied by great cephalic, gastric, and general disturbance, and at times the eruption appears to extend to the intestinal canal, giving rise to severe pain in the abdomen, diarrhoea, and typhoid symptoms, under which the patient may sink."

Dr. J. H. Hollister says: "In a great number of instances, the disease has made its appearance as the immediate sequence of constipated bowels, and was relieved almost as soon as the proper correction was made." Vide Trans. Ill. Med. Society, 1859, page 47.

Dr. D. S. Brandon, after enumerating the mouth symptoms, says: "To these may be added, burning in the stomach, with occasional vomiting, constipation, or diarrhoea, more or less obstinate." Southern Med. & Surgical Journal, Jan. 1860, p. 4.

I am now in attendance on Mrs. R., who is seven months in pregnancy. She complains of acidity of stomach, and evidences of gastric derangements, and the urine is so intensely acid as to produce severe inflammation and excoriation of the external parts. She has had Stomatitis Materna during previous lactations, both here and in Central New York. I look for the same sequence after her confinement, unless that condition of the stomach is relieved, but not otherwise. In one of the worst cases I ever saw, Mrs. H., it always accompanied acidity and was readily relieved by tonics and antacids. I could point to case after case presenting the same association of symptoms, readily relieved by remedies addressed to the stomach, so that I am accustomed to direct my attention to that organ, and am not inclined to look upon the disease as so uncontrollable and unpromising as many writers.

Much of our knowledge of the character of disease is derived from observance of the effects of remedies. An important hint, as to the pathology of this disease, may be obtained by reviewing the various remedies proposed by different writers. Dr. Backus may have been hypothetical
in his opinion of this malady, but he certainly indicated a principle in its treatment, the wisdom of which is evidenced by its general adoption. His prescription is as follows:

R—Carb. Ferri. - - - - grs. xlv.
Pulv. Rhei. - - - -
Gum Aloes. - - - - aa grs. xv.
Pulv. Ipecac. - - - -
Sapo. Hisp. - - - - aa grs. xij.

M. Ft., Pill No. 50. "Two of these pills should be taken twice or three times a day or often enough to keep the bowels very open."

Dr. Hale rests the cure chiefly on "tonics, such as lime water and infusion of bark." Dr. Wood says "the most efficient remedies are said to be tonics, antacids and laxatives." Dr. D. S. Brandon, in a paper before referred to, lands turpentine, combined with castor oil or laudanum, according to the state of the bowels; "say twelve drops three or four times a day, on a little loaf sugar, and in no instance that I know, or have heard of, has it failed."

Dr. Armor proposes the syrup of hypophosphites, combined with Sime's Elixir of Peruvian Bark. It may be surmised that the Elixir has as much to do with the cure as the hypophosphites.

I am accustomed to use the two following prescriptions with uniform success:

R—Mag. Calc. - - - - 5i.
Sapo. Hisp. pulv. - - - - grs. x.
Camphor " - - - -
Mix. Dose from three to five grains, four times daily.

R—Cinch. Rub. - - - - 3ss.
Rad. Rhei. - - - - aa 5 ij.
Port Wine. - - - - Oj.

Ft. Mist. Dose, table-spoonful with each meal.

When there is loss of appetite, I direct the tonic to be taken half an hour before eating, and the powder soon after, otherwise both are to be taken soon after eating. In many cases where there is not much constitutional debility, and in the earlier stages I find the first prescription amply sufficient to control the disease.

Many local applications have been proposed; among them nitrate of silver has received its due amount of laudation. I have seen this used repeatedly, often with no benefit, and at most affording but temporary relief. With
correct views of the pathology of the disease, such an event might be anticipated. When I hear of a physician using this treatment, I am constrained to think he does not know what he is dealing with—that his opinion of the disease does not extend any further than he can see.

Very many writers and practitioners recommend, in severe cases, the weaning of the child. My experience and observation is such as to lead me to hesitate to recommend any such procedure. It may be conservative to the mother's health, but there is a tender offspring, who claims our sympathy and consideration as well as the mother. The chances of rearing children throughout our land are few enough at best—small, indeed, in our cities—and fearful to the child that is weaned in the first weeks of its existence. A recommendation to wean the child in such cases in our city, is but a warning to prepare its shroud. I scarcely know an instance in this city where a child has survived the first two or three years of its perils, when weaned as a cure of stomatitis. I have seen mother's turn away from such counsel, and avow their resolve to suffer on rather than expose their offspring to such fearful odds. There may be, and indeed are, severe cases when this procedure seems imperative. I speak only against the indiscriminate recommendation of some practitioners, believing that, with proper treatment, a vast majority of mothers will survive and preserve their offspring.

With the above digression, I return to the consideration of the pathology of the disease.

Post mortem examinations of the disease are not abundant. A few have been made. I take from a valuable contribution to the literature of this disease, the following appearances, as described by Dr. McLean:

"The stomach was almost completely denuded of its mucous coat, with numerous patches of ulceration extending deep into its muscular tissue. A small patch around the pyloric orifice of the stomach, was the only healthy portion." Trans. Ind. Med. Society, 1856.

Many writers have asserted positively that the disease occurs only in females, chiefly during gestation and lactation. Others, on the other hand, declare as assuredly that it occurs also in men, boys and girls. I can only add to the strength of the latter position. I am certain I have seen it in that class of persons with characteristics as prominent and unmistakable as in nursing women. Its only difference seemed to consist in less persistency, owing to a more ready removal of the causes. I had abundant opportunity to ex-
amine a case of the kind occurring to a gentleman about thirty years of age. In this case the stomatitis occurred several times, immediately after eating blackberries preserved in tin cans a long time. Each attack was ushered in by the scalding sensation in the mouth, so intense as to cause severe suffering for several days, by vesicles with inflamed bases, by corrugation of the mucous membrane on the side of the tongue, slight swelling and ulceration of the mucous membrane. In this instance the primary effect was obviously on the stomach. The stomatitis not following immediately, the cause was not discovered till after eating several times.

It may be true that we do not meet with it in so severe a degree as in nursing women. Such might be anticipated. All know that pregnancy and lactation exert a powerful and modifying influence on the stomach, both in health and disease. But I think that here the nervous system is more the medium for communicating sympathetic influence than the blood.

"Its attacks are not confined to any particular constitution or temperament, but are at times made on the most robust, who always enjoyed good health." Bell & Stokes, vol. 1, page 53.

This accords with my observation and experience, but is hardly consistent with the exclusive anaemic hypothesis of some writers.

It does not come within the scope of my object to give a detailed account of the local, mouth symptoms of this malady. They have been already sufficiently indicated in the foregoing. My object has been to indicate a few points in the history and character of this malady. If the position assumed is correct, the mouth symptoms become comparatively unimportant to the practitioner. His remedies must be directed to the stomach. My aim has been to substantiate the following positions:

First. That the history of the disease extends too far back to entitle it to the claim of a new disease.

Second. That so far as known it occurs in all localities, and is not limited to malarial districts.

Third. That the primary seat of the malady is in the stomach, modified in the female by gestation and lactation, and followed by constitutional aberration as sequellae.

This is sustained, 1st, by correlative symptoms; 2d, by therapeutical applications; 3rd, by post mortem examinations.
Fourth. That nursing women are the chief sufferers, but that it occurs in other classes of persons.—*Chicago Med. Jour.*

*Atropia in Incontinence of Urine.* By A. F. Pattee, M. D., of West Amesbury, Mass.

After observing the effects of belladonna in incontinence of urine, so highly spoken of by many writers in different medical journals, the writer was induced to try the alkaloid principle, Atropia, knowing that the effects produced upon the system are exactly those of belladonna, only that they are relatively more powerful, while the extract and tincture often require a much increased dose, and often fail to produce the desired effect.

The dose can be more easily managed, and danger from poison avoided. It can be given in solution, with but little observable taste, which is of much advantage when given to children.

Before giving the Atropia, attention should be given to the alimentary canal—correcting all irregularities, so far as possible. We often find some tenderness of the spinous processes of the dorsal and lumbar vertebrae, which should be rubbed twice daily with some stimulating liniment. The diet should be plain and unstimulating; water or slippery-elm bark tea for drink.

I have prescribed the Atropia in thirty cases, four of which were of long standing, and had been under treatment for a long time, a diversity of remedies having been used. All were completely cured, in a period of from six to fifty days.

The one-fortieth of a grain was given, three times a day, to adults, in solution, until the usual symptoms of belladonna is produced—that is, dilatation of the pupils and dryness of the fauces. The solution can be made as follows:

\[
\text{R—Atropia, } \text{gr. i.} \\
\text{Aqua Destill, } \text{gr. i.} \\
\text{Acetic Acid, } \text{gtt. vi.}
\]

M.

Dose: one drachm, three times a day—morning, noon and night—increasing or decreasing as occasion may require. For children, the dose must be graduated in proportion to their ages.
EDITORIAL AND MISCELLANEOUS.

CROUP AND ITS TREATMENT WITH ANTIPERIODIC DOSES OF QUININE.

By Henry F. Campbell.

We can listen with more complacency to a minute recital of all the horrible circumstances of a child's death by any accident, whether blown up with gun-powder or mangled by a train of cars, than we can hear the simple announcement, "a child has died of Croup." In the one, a momentary pang has probably extinguished life and suffering together—in the other, hours, days, sometimes weeks of agony, both bodily and mental, foreshadow a death fully as unavoidable and not less horrible, either to the little sufferer or its attendants. Few who have watched a case of croup from its hopeless stages to its termination in death, will dissent from the horror we here express, or will object to a review of any method of treatment which promises the remotest hope of averting the painful scene of a child's death-bed where croup is the dread destroyer. It is, par excellence, the opprobrium of our profession, and since cure is so uncertain, in its latter stages, let us consider, with at least patience, whatever of prevention can be suggested in its insidious beginning.

Croup, as it has occurred under our observation in the Southern country, we are persuaded, has an obvious and important relation to Malarial Fever. It is nearly always at first, a neurosis, manifesting itself in paroxysms, by a series of symptoms, either of a spasmodic or inflammatory character, while frequently, these two classes of symptoms are intimately blended. Any case of spasmodic croup is liable to become true membranous laryngitis, but membranous laryngitis is not always preceded by spasmodic symptoms. These last are not frequent, except from the extension of Diphtheritic inflammation from the fauces down into the larynx, there establishing what we consider the most fatal of all the varieties of croupal disease, for, besides the mechanical obstruction to the air-passages, there is a constitutional asthenia, a combination which often strikes a chill of despair into the heart of the medical attendant, long before the more notable aspects of the case portend a fatal termination. Of these cases, we will present our notes on a future occasion.
In cases where spasmotic croup becomes transformed into the membranous form, the process is not an evenly progressive one, but the course towards this more serious variety, is interrupted by remissions, and often by the most decided intermissions, the respite often occupying from twelve to twenty-four hours. This is especially the case in the beginning of the disease, and this is the true, and indeed, often the only, period for efficient medication. A child is attacked suddenly in the middle of the night with all the urgent and apparently dangerous symptoms of what is ordinarily called Spasmotic Croup; an emetic, a cold wet bandage to the throat, or some other favorite efficient means promptly relieves the urgency of the attack, the breathing becomes free, but is still somewhat hoarse, the child sleeps well, and wakes in the morning apparently as well as ever—there may be some hoarseness towards evening of the next day, but the attack is over and the child considered well. At night again, perhaps, a few hours before the time of the previous attack, all the symptoms return—there may be fever, but generally as yet there is none—the same remedies are again applied—perhaps more active treatment is resorted to, and the child is again relieved—perhaps permanently, as very often occurs, we are free to admit—but again, perhaps not, and this last possibility should give every case of spasmotic croup all its importance in the eyes of every practitioner. If the case is not one which is to take the favorable course, the child will be found hoarser after the second attack than after the first; this hoarseness will greatly increase towards night, when again there will occur a paroxysm more violent than ever, more difficult to relieve, and on the subsidence of the spasmotic symptoms, there will be found still remaining a difficulty in respiration—a persistant distress, indicating either thickening of the mucous membrane, or the effusion of the material for false membrane. That which was dynamic has now become organic—functional occlusion of the air-passage from muscular spasmotic action—has now become a mechanical obstruction from an encroachment on, and diminution of, the calibre of the air-tube. The chances may be said even now to have nearly passed, for a hopeful prognosis—the treatment, after this, is admitted on all hands to be inefficient, and the result uncertain.

It is not of the cases when they have arrived at this stage, that we wish now to speak. It is our object here to urge what we consider almost a specific treatment, which is particularly applicable in the early part of the disease, but by no means unimportant even later. We refer to the administration of Quinine in efficient doses during the intermissions and remissions characterizing the initial stages of the disease.
The treatment of croup, then, like that of intermittent fever, the great archetype of all paroxysmal diseases, may be divided into—1st, measures appropriate during the attack; and 2nd, those appropriate during the intermission or remission. We consider the division just as important here as in cases of true paroxysmal fever.

During the attack, we regard emetics of the first importance; efficient doses of ipecac we prefer to all others, but lobelia is valuable, and frequently used by many. We deprecate the common domestic practice of giving castor oil or lamp oil, as one of the first expedients in croup—for though these remedies often effect relief, still, when they fail, their action on the bowels often renders all attempts at producing emesis entirely nugatory. We prefer, therefore, the administration of emetics as the very first movement towards treatment.

Cloths wrung out in cold water we have found one of the most valuable means during the attack. It seems to act often, immediately, in relieving the stridulous breathing and allaying the distress. Among our notes is a remarkable case occurring in the practice of Dr. Robert Campbell, wherein this application was the principal remedy used, and to it the fortunate result of the paroxysm, was entirely due. Large doses of Quinine were used in the intermission. When the emetic has acted efficiently, and the paroxysm is somewhat relieved, there remains great hoarseness and a tendency to a return of spasmodic constriction. There is often great dryness in the laryngeal respiration. At this stage we have found Turpentine a most valuable remedy, administered in the following manner:

\[
\text{Rj. of Spts. of Turpentine,} - - - 5j. \\
\text{Brown Sugar,} - - - - 5ss. \\
\text{Water (warm),} - - - - 5vj. \\
\]

Mix well. Dose, one teaspoonful every hour or half hour, till the hoarseness subsides, when the time of administration may be prolonged. The use of turpentine should not be too long continued, on account of the unpleasant effect often produced by this remedy upon the urinary organs of children. We have found this one of the most valuable remedies during the paroxysm, after the free use of ipecac. We nearly always follow any other treatment of the paroxysm, by the use of turpentine.

Our treatment during the intermission or remission, though by far the most important part, may be given in but a few words, for it may be summed up in these two: Give Quinine.

It is our constant, we may say invariable practice, to administer efficient doses of quinine each day, for two days, after each paroxysm of Spasmodic Croup, with the view of preventing its return, and we expect
this effect to follow its administration with as much certainty as when the
drug is given in true paroxysmal fever. The time we have found best
for the administration of Quinine is to begin in the earlier part of the
day, and to continue it in such quantities as to keep the patient fully
under its influence until the period of the next paroxysm. The quantity
of quinine usually given in cases of croup, between each paroxysm, va-
rises from v. to xv. grains, (in divided doses) in accordance with the age
of the child and the seriousness of the previous attack. Any remaining
hoarseness which may exist at the time of beginning the use of quinine,
usually subsides under the continuance of the doses. A good rule as to
the amount to be given is, to continue the doses till quininism is mani-
fested by the "ringing in the ears."

It will be observed that we recommend the giving of Quinine in the
intemissions for two days; the object of this is, that its administration
may be adjusted to both the quotidian and the tertian type of the croupal
paroxysms. It is by no means uncommon to find that this measure of
antiperiodic treatment may fail on account of a miscalculation as to the
period for the return of the paroxysm. It is therefore safer to give
quinine two days where the paroxysms had been at all violent.

We have thus hastily presented our views on the importance of
Quinine in the treatment of the early stages of Croup. We daily read
essays on the subject of this fearful disease, in which there seems to be
no systematic or rational plan of treatment. The paroxysmal feature of
the affection seems to be often entirely overlooked, and quinine is but
seldom mentioned with confidence, as a remedy.* Our confidence in the
above reported method of treatment, is the well-founded conviction of
experience. The record of a detail of cases would occupy much space,
and could add nothing to the confidence of the reader.

It is by no means uncommon for croup to prevail in certain localities,
with a frequency of cases, (especially where there is a diphtheric ten-
dency) to entitle the affection to the character of an epidemic—in such
circumstances, we would say, in conclusion, that the free administration
of Quinine, in the earlier period of the disease, would doubtless prevent
the advance of the affection to the membranous and fatal stages; and,
under all circumstances, Quinine, in these earlier stages, should never
be omitted.

* The present number of this Journal will be found to contain a valuable
selected article on page 363, entitled "The Croup Process, by M. Porges."

[See Article XI of present Number.]

There is but a single additional remark which we would desire to make on the effect of Caffeine, as observed in the foregoing case. Mulder, as we have seen, gave this alkaloid to rabbits, and the animals aborted on the second day after its administration: Albers, in one series of experiments on frogs, administered the agent by the stomach, and in another, introduced it into the tissues beneath the cutaneous surface—the effect in both instances, was to produce a tonic condition of the muscular system. In our patient, the muscular relaxation was extreme; his head would fall from side to side, his tongue hung out of his mouth, in the prone position, and fell back into the fauces, in the recumbent posture; not a fibre in his entire muscular system seeming to possess its normal tonicity. And yet, in less than an hour after the administration of a very large portion of Caffeine by the rectum, all this had suddenly disappeared, and he was in the exercise of the most active muscularity; pulling away from his attendants, pushing them from his bed-side, jumping out of bed, and performing every variety of movements in the most energetic and well co-ordinated manner. From this simple collocation of the experimental facts of Mulder and Albers, and of the observed facts presented by our case, there certainly appears to be a relation between the phenomena of the one and those of the other, which has a bearing on the muscular system. Caffeine, it would appear, then, somewhat in the same manner as strychnine, may be regarded as one of our most efficient agents for restoring muscular contractility, and for reviving the tonicity of the muscular fibre.

The principal object of the present report, however, is only to extend the results of the above remarkable case, wherein the antinarcotic effect of the drug had been very apparent; and we therefore desire to dwell no longer on incidental physiological phenomena.

The Chemist and Druggist.—We have received, through the U. S. Agent, Mr. Henricks, of New York, a specimen of the above monthly circular. Each number contains a variety of interesting and useful information, pertaining more particularly to Chemistry and Pharmacy, and is published in London, England. As a Trade-Circular, we regard it a highly valuable publication, and take pleasure in commending it to those who wish to become conversant with Chemical and Pharmaceutical affairs as conducted in England and other European countries.

Communications are requested to be addressed to "Mr. Henricks, 150 Broadway, New York."
**Fluid Extract of Chamomile.**—The use of chamomile, not only as an agent to improve the digestive functions when disordered by disease, as an antiperiodic, and as a general tonic, but as an agent for preventing suppurations in phlegmonous erysipelas, in phthisis, and, in fact, every case in which it is desired to prevent too abundant suppuration, suggested a concentrated preparation of it, in the form of a fluid extract.

Take of fresh chamomile flowers, — - - 1 pound.
Alcohol of sp. gr. 871°, — - - q. s.
Moisten the chamomile, in coarse powder, with the alcohol, then pack in a percolator, and cover with the alcohol; digest six days, and draw off twelve ounces, which set aside. Continue the displacement with diluted alcohol, until it is freely exhausted of its bitterness, which evaporate in a vacuum to four fluid ounces. Mix and filter. One drachm of this preparation represents sixty grains of chamomile flowers, which is usually given in doses of twenty grains, as a tonic, to one drachm, as an antiperiodic—making the dose for like cases from twenty minims to one fluid drachm.

**Syrup of Chamomile.**

Take of fluid extract of chamomile, - - - 4 ounces.
Syrup, - - - - - - 12 "
Mix, with syrup moderately warm, and strain through flannel. The preparation is as clear as that made from the flowers, with the convenience of being made at will. The dose is one fourth that of the fluid extract, or from two to four drachms.

**Iodide of Ammonia in Syphilis.**—As the result of several trials made by M. Gamberini, of Bologna, it is stated—1. That it is suitable in all cases in which iodide of potassium and sodium are employed. 2. It leads to a rapid cure. 3. The quantity given daily may be carried as high as from half drachm to half ounce, and intolerance is rarely exhibited. 4. Employed in friction with olive oil, it causes the disappearance of nocturnal syphilitic pains. 5. The signs of intolerance are a sense of burning in the throat and heat of the stomach; these rapidly disappearing on the suspension of the medicine for a couple of days. 6. Under the internal use of this medicine indurations consecutive to hard chancre disappear, as do also the indurated ganglionic pleiades in the groin. 7. Arthralgia, rheumatoid affections, periostitis, enlarged glands, and papulo-vesicular syphilide of the back, are the forms of syphilis which have best yielded to this drug.—*Bull. de Therap.*
American Medical Society of Paris.—It appears, from the correspondence of the New York Times, that this Association recently attracted the attention of the Police by neglecting to give the requisite notice, on a change in its place of meeting: "For several months the meetings were held in the new place, when it became necessary, for some incidental affair, to hold communication with the Prefect of Police. New men in the meantime had been placed at the heads of bureaux—men who had never heard of such a society; and societies, ever since the dangerous clubs of 1848, are the particular horror of the Police. The consequence was that there was a great row at the Prefecture about that very innocent institution. The first thing was to order the Society to cease its meetings. The next thing was to call the Commissary of the new district to account for permitting a society to go on unnoticed in his district, for he knew absolutely nothing of it, and had made no report on the subject. He came near losing his place by his neglect. The President of the Society was called twice to the Prefecture, where he was obliged to enter into endless details on the nature of the Society, the character of its members, and the limits of the debates.

"A domiciliary visit was also made by a secret agent to all the members—that is to say, to their concierges. The President, in his capacity of chief conspirator, was honored with two visits. Questions were asked as to what sort of individual each was, when he went out and came in, what sort of company he kept, whether there were ever many persons at one time in his room, &c. When the Society resumed its sittings, a policeman was sent to attend the two first meetings, to be able to report from sight that the Society was really what it purported to be, and that no political discussions took place. He did not understand English, but he expressed himself satisfied all the same; and, with mutual expressions of regret at what had occurred, the affair terminated.

"Evidently the Society was to blame in not fulfilling a simple requirement of the law—a requirement which seems indeed very simple and very insignificant, but which happens to concern a system so delicate and so complicated in its structure, that, like a watch, the least jar throws it into a terrible confusion."

The annual meeting of the Illinois State Medical Society will take place on the third Tuesday of May, 1860
Treatment of Obesity.—Mr. Duchesne Duparc read a short paper on the use of *fucus vesiculosus* for the treatment of obesity. Having tried this plant for the cure of inveterate psoriasis, the author came to the conclusion that its reputation for the removal of that disease was much superior to its real value; but that in another respect the drug produced an unexpected result, *fucus vesiculosus* inducing rapid loss of flesh, without discomfort or disturbance of the digestive functions. Mr. Duchesne related several cases, whence it appears that in persons affected with premature or excessive obesity, the weight of the body may be much reduced by the use of the leaves and stems of *fucus vesiculosus*, in decoction, powder, or pills.—*Champ. Journal*.

A New Method of applying Chloride of Zinc.—The following formula is recommended by Dr. G. W. Spence, of England, for a chloride of zinc paste. Dissolve fifty grains of prepared chalk in two drachms (by measure) of commercial muriatic acid; dissolve one hundred and fifty grains of sulphate of zinc in two fluid drachms of boiling water. When required for use, mix the two solutions, and the result will be a paste weighing near an ounce, and containing about one-sixth of pure chloride of zinc.—*London Lancet*.

Mr. S. T. Trowbridge, of Decatur, Ill., has invented a physician's cane. It consists of a hollow tube, closed at its bottom, and having a semi-tube attached to the knob or handle, and fitted within the cane, and allowed to move freely in and out of it, and forming a receptacle for vials containing medicines. The invention is designed to supersede, to some degree, at least, the use of the saddle-bags.

Humboldt's Library.—We see it stated that Humboldt's library has been purchased for 40,000 thalers by Lord Bloomfield, minister of England at Berlin. It had previously been announced that the library had been purchased by Mr. Wright, the American Minister at Berlin.—*Med. & Surg. Reporter*.

Only thirty-six colored children were born in the city of Providence, Rhode Island, during the year 1859—and in the month of January, of the present year, twelve colored persons died.

The American Medical Association meets in New Haven in June next.