SOUTHERN

MEDICAL AND SURGICAL JOURNAL.

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"Je prends le bien où je le trouve."

VOL. III.—1847.—NEW SERIES.

Augusta, Ga.
JAMES McCafferty,
PRINTER AND PUBLISHER.

1847.
PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Remarks on the use of Quinine in Intermittent and Remittent Fevers. By L. A. Dugas, M. D., Professor in the Medical College of Georgia.

Having received during the past season a number of communications requesting my views on the use of quinine in the treatment of our autumnal fevers, I beg leave to reply to them through the medium of this Journal.

The fevers of this section of our country, being almost exclusively paroxysmal, it may be well to premise, very briefly, my views of their pathology, by which it will be perceived that I regard them as essentially different from those continued fevers more commonly encountered in colder latitudes, and which have been denominated Typhoid, Typhus, Follicular enteritis, Dothenenteritis, Jail fever, Ship fever, &c.

Our paroxysmal fevers are either intermittent or remittent at their onset; but, if not arrested, the former may, more or less early, become remittent, or the remittent assume the intermittent type; thus showing them to be only different degrees of the same disease. They both present the same paroxysmal phenomena, that is to say, have regular periods of recurrence or exacerbation, and of declension; they are both preceded and accompanied by a general disturbance, more or less marked, of all the functions of the system, but more especially of those usually termed nervous, as those of sensibility and muscular motion. Lassitude, pains in the limbs, back and head, loss of muscular strength, are premonitory and persistent in both. The activity of the circulation, however great, is not continuous as in the phlegmasia, but partakes of the same paroxysmal character as the other phenomena. Indeed it may be established as a
maxim, that no inflammatory disease ever assumes the paroxysmal character, inasmuch as all inflammations pursue an uninterrupted course, whether they terminate in resolution, suppuration or gangrene. Wherever inflammation is exposed to occular observation, it is never seen suddenly to disappear and to return at stated intervals, or otherwise; but it runs a uniform course which cannot be suddenly modified by the efforts of nature nor by any agent with which we are acquainted. Pure inflammation of internal parts, as pneumonia, pleurisy, acute articular rheumatism, enteritis, &c., observes the same course; there is nothing paroxysmal in these diseases; the febrile action is not attended with daily or periodical exacerbations, but gradually progresses to a certain point, and then gradually declines with the subsidence of the inflammation. Periodicity or the paroxysmal peculiarity is characteristic of the neuroses properly so called—of diseases of the nervous system, which modify the functions of remote organs, and which may be dependent upon congestion, but certainly never upon inflammation. We know of no organ, whose inflammation could furnish us any rational explanation of the varied phenomena of intermittent or of remittent fever. Let us however look to the nervous system for the solution of the problem of these fevers, and all becomes perfectly plain. The languor, lassitude, general and local pains, tremor, modifications of the capillary as well as of the general circulation and of the secretions, and, above all, the abrupt transitions from a normal state to one of great perturbation, and from this again to comparative health, together with the periodical returns of the morbid manifestations—all indicate manifestly great disturbance of that pervading system whose condition is reflected in every part of the body—the nervous system. There is no other system whose impairment could by any possibility yield us the phenomena above related; still less is there any single organ that could by any modification of its condition, produce such general perturbation of the acts of the economy. Intermittents and remittents then are unquestionably the manifestations of deranged innervation; and if arrested sufficiently early will be attended with but little injury to any organ. A continuance or frequent repetition of this derangement, however, may more or less seriously implicate the parenchymatous and secreting structures, inducing inflammatory action, and may even terminate in fatal congestions.

With these views of the pathology of paroxysmal fevers, we are led naturally to the use of such remedies as are calculated to arrest
or to modify the perversion of innervation. Theory alone would indicate a resort to any agent known to blunt the nervous sensibilities, and thus to diminish their mobility or tendency to perturbation. Narcotics would present themselves in the first line. Every one knows that opium, morphine, camphor, alcoholic liquors, sulphuric ether, &c., are valuable remedies in intermittent fevers. Indeed, a favorite prescription with me in such cases is a combination of 2 parts of sulphuric ether, 1 part of tincture of camphor and 1 part of tincture of opium, of which I give a ten-spoonful in a wine-glass of cold water two hours before the expected paroxysm, and half this quantity again at the expected hour of attack; the patient remaining in bed during the effect of the remedy. This rarely fails in uncomplicated cases of intermittent fever; if it does not completely succeed the first day, it will the next. I have frequently averted, or favorably modified even a paroxysm of remittent fever by the administration of a full dose of morphine (\( \frac{1}{4} \) to \( \frac{1}{2} \) gr.) half an hour before the expected exacerbation. But the efficacy of narcotics is not so fully borne out by experience as is that of quinine, an agent which as yet holds a position unique in the materia medica. The most striking peculiarity of quinine is its power to prevent the return of periodical affections, and this appears to me to be effected by blunting the susceptibilities of the nervous system. The senses whose acuteness of perception we can most easily observe, are manifestly blunted. Audition is very soon impaired, and so is vision, if the dose of the remedy be large. The effect of quinine on the heart, in our fevers at least, is unquestionably to diminish the force and frequency of its action, and if the quantity administered be large, a general relaxation, attended with a profuse cold sweat, will be produced, resembling and therefore mistaken by the inexperienced for a collapse of fatal tendency. Having tried it in cases of pure phlegmasia, in pneumonia and acute articular rheumatism, for example, without any aggravation of the febrile action, I cannot regard it as a stimulant.

There is, I believe, no difference of opinion in relation to the value of quinine in the treatment of intermittent fevers. I will, therefore, now confine my remarks to Remittent fevers, comprehending under this term, bilious, malignant, congestive, and country fevers. These are usually preceded by premonitions, which if properly attended to, would enable us to avert their development with great ease. It is, however, exceedingly rare that medical aid is invoked thus early, and the physician is generally called in only during the first or second
strong paroxysm; often much later. The paroxysm, when once fully
developed, will usually run its course despite of any efforts we may
use to check it. I therefore generally direct merely a foot-bath, and
the free use of cold drinks, as water, lemonade, or soda water, until the
period of remission. Should there be, however, such a determina-
tion to some vital organ as to threaten serious injury before the
equilibrium of the circulation be restored by the subsidence of the
exacerbation, I abstract blood with cups to the spine, sometimes
(though rarely) deplete from the arm, and urge the use of revulsives,
as hot and stimulating pediluvia, and sinapisms to the spine, epiga-
strium, feet, &c.; if the head be congested, the affusion of cold water
to it, continued until the pulse be depressed, and repeated as this
reacts, is the most efficacious application I know of. Saline enemata,
especially if the bowels are full, should not be omitted, as cathartics
will very rarely act during the stage of excitement. If the conges-
tion be attended with cold clammy skin, a small and feeble pulse,
and prostration of the vital energies, I advise, in addition to the re-
vulsives, large and repeated doses of the above-mentioned combina-
tion of ether, laudanum and camphor, until reaction take place.

The exacerbation having subsided, our treatment should be direct-
ed to the prevention of its return, and my invariable rule is never
to permit the occurrence of another paroxysm after I see the patient.
But, it will be asked, can this rule be carried out? I answer that it
can in the great majority of cases, and that in those in which we fail
to accomplish all we desire, we yet so modify the state of things that
success is almost certain on the day following. If we be fully im-
pressed with the belief that the fever being once arrested the patient
will rapidly return to health, the importance of the rule cannot fail
to be appreciated; and that such is the fact will not for a moment
be denied by any one who has ever tried the practice we recommend.
I repeat, that if all our efforts be directed to the prevention of another
paroxysm—if we resolve never to allow a patient to have another
exacerbation after we see him, the cure of remittent fevers will al-
most invariably be effected in a day or two.

In the accomplishment of our resolve, quinine must be regarded as
the sheet anchor of our dependence, for although we may resort to
other means, these can never be but of secondary value. Nor is it
necessary in ordinary cases to use such large quantities of the quinine
as are recommended by some. The quantity I use in one remission is
usually from 15 to 20 grs., but I have sometimes given 30 or 40 grs.;
never more. It is rare that less than 15 grs. will prevent the expected paroxysm. Whatever be the quantity we may estimate as necessary, this should be given in such a manner as to have the system fully under its influence an hour or two before the time of the previous exacerbation, and to continue its influence a couple of hours after this time. If the period of remission be eight hours, we may administer 2 grs. hourly—if it be five hours, we may give 3 grs. hourly—if three hours, 5 grs. hourly—and if only one hour, we should give 20 grs. at once, and smaller doses subsequently, if necessary, to insure success. According to my observation the number of doses is a matter of but little moment—the quantity given in a remission is all important. This will depend upon the violence of the attack, the number of paroxysms that have occurred before we see the patient, and the kind of treatment to which he may have been previously subjected. As a general rule, the quantity should be increased as the period of remission is shortened, and in proportion to the number of paroxysms that have preceded its use. I am inclined to think also that it requires more quinine to prevent a paroxysm in one who has been depleted or acted on by emetics and cathartics than in one who has previously been subjected to no medication. The convalescence is certainly more rapid when no debilitating process has been instituted, and health is almost immediately restored if the disease be arrested with quinine on the occurrence of the very first paroxysm. There is some choice in the mode of administration, for the sulphate of quinine will act more slowly if given in powder than in solution, and still more so in pills than in powder. Whenever, therefore, a prompt effect is necessary, the solution should always be preferred. If the stomach will not retain it, it may be thrown up the rectum with a little flax-seed tea or thin starch, in about the same dose as if given by the stomach. In this way it acts remarkably well, and, in the treatment of children, who evince great reluctance to its taste, this mode of administration is peculiarly happy.

But the query is often made: would you give the quinine in cases of remittent fever in which the head is evidently affected,—when there is intense cephalalgia, or coma, or delirium? in cases in which the stomach seems implicated—the patient vomiting frequently and rejecting every thing he takes? in cases in which the bowels are too loose, or very easily disturbed? in cases in which the liver is either torpid or secretes inordinately? in cases in which one paroxysm runs into the succeeding so completely as scarcely to leave any re-
mission of consequence? I answer, unequivocally, yes—and that
the stronger the tendency of the disease to localize itself, the more
urgent is the necessity to arrest it; for this tendency will increase
with every paroxysm, and cease as soon as their return be checked.
Let us always bear in mind that the paroxysms are not occasioned
by the affection of the head, stomach, bowels, or liver, but, on the
contrary, that these are the consequences of a deranged innervation
and of the paroxysmal condition, and our duty is plain. Let us not
be alarmed by the bug-bear inflammation and vitiated secretions, nor
be deterred from the use of quinine because some still believe it a
stimulant, and our success will very soon eradicate every vestige of
former prejudices on this subject. It was not without much difficulty
that I succeeded a few years ago in persuading a planter, who had
long been in the habit of looking on bilious fever as occasioned by
the presence of vitiated or superabundant bile, and who consequently
treated his negroes with emetics, cathartics and mercurials, that if
he would use quinine at the outset, his hands would be in the field in
a few days, instead of losing from ten to fifteen days whenever at-
tacked by fever. And yet, after he had fully satisfied himself of the
advantage of the proposed change of treatment, his first observation
on meeting me was always—"what becomes of the bile? I am afraid
that it is still in the system and will again do mischief!"

In order to illustrate some of the positions I have assumed, I will
relate a few cases in which the remission was very slight, and the
tendency to localization imminent.

On the 12th of October, 1841, I was called to see a lad about 10
years of age, and found him in the height of the second paroxysm of
a most violent attack of remittent fever. The pulse was full, strong
and active; the heat of the surface intense; he complained of violent
head-ache, yet was incessantly tossing himself about the bed in wild
delirium; his stomach and bowels were quiet. I had but a few
days previous seen a patient about the same age, and in the same
neighborhood succumb (without quinine) in the third paroxysm of a
similar attack, and I had every reason to apprehend a similar issue in
this case, if another paroxysm were permitted to occur. It was now
2 o'clock, P. M. and the next paroxysm was expected to commence at
8 in the evening. He had taken a cathartic the day before I saw
him. I immediately opened a vein, to prevent increased injury to the
brain, and abstracted blood pretty freely; then applied a blistering
plaster over the dorsal region of the spine, and commenced the use
of quinine in doses of 2 grs. every hour. At my evening visit (7 o'clock,) I found him quiet, free from delirium, and with very little fever. Ordered the quinine in doses of 1 gr. hourly through the night. The next morning I found him sitting up, without fever, and wishing something to eat. He had no return of fever, took no more medicine, and was perfectly well in a few days. I would remark that the delirium entirely subsided only, after he had taken several doses of quinine. I have since given it during delirium, without bleeding, and with equally good effect.

On the 28th October, 1841, I was requested to visit a gentleman, about 45 years of age, on the 5th day of a severe remittent fever. I found him with high fever, lying on his back, and so comatose that it was with considerable difficulty that he could be made to notice questions, to which he would then make incoherent replies. His surface was moist with perspiration, though warm. His pulse was frequent, and somewhat strong, but not sufficiently so to warrant bleeding at so advanced a stage of the case, and especially as he was of intemperate habits. He had taken two or three cathartics—and the onset of the next paroxysm was expected in three hours. The case was such, that death must of necessity attend the supervention of another paroxysm. Under these circumstances I ordered 5 grs. quinine in solution every hour, and remained to watch the effects, for I was not at that time as well acquainted with them as at present. Indeed I had not before ventured the use of quinine under a similar determination to the head. The administration of each dose, was attended with manifest improvement, so that when the time arrived for the recurrence of the paroxysm, my patient was perfectly lucid, had no stupor, and but little fever. I then left him, with orders to take 1 gr. of the quinine hourly, for twelve hours. On the following morning he was sitting up, without fever, and had none afterwards. A mild laxative was all he took during the rapid convalescence.

During the same month, I attended a girl 8 years of age, whose remittent fever was marked by great gastric irritation, so as to cause her to reject every thing she took; quinine solution administered per rectum as readily controlled the disease in this as it did in the above cases.

More recently, I saw a gentleman who had been seized at 9 o'clock A. M. with a chill, which was soon followed by the most intense head-ache, intolerance of light, pain in the back and limbs, as well as at the epigastrium. Being of a sanguineous and plethoric habit, I
bled him; then applied sinapisms to the spine and epigastrium, and
prescribed a beverage of cream of tartar and cold water. In the
afternoon I found that the fever was still high, that he had vomited
repeatedly; was much distressed with nausea, and had been gently
purged. The sinapisms were ordered to be repeated, the cream of
tartar to be discontinued, and small quantities of iced water to be
used to relieve thirst during the night; doses of 5 grs. quinine (in
powder) were left, one to be taken in very little water at 4 o'clock
the next morning, and repeated every two hours thereafter. I visited
him at 8 A. M. and found that the fever had continued high during
the night, and remitted only towards morning. He had taken 15
grs. quinine, and now had but little fever, although the nausea still
persisted, and had caused him to reject the quinine twice, but which
being repeated was finally retained. During this day the febrile
exacerbation was much less intense, and he was kept on the use of
iced water with a little lime water added to it. On the following
morning, the nausea still being troublesome, and, apprehending that
the quinine in solution or in powder would be rejected, I gave it to
him in pills, 4 grains every two hours until he had taken 16 grains.
These were retained, the nausea gradually subsided with the fever,
and in the afternoon he was convalescent. He suffered a little from
debility, but without further treatment, he was out in a few days.
In this case head-ache and gastric irritation instead of being increas-
ed, subsided under the use of quinine.

We are frequently called to cases in which we cannot ascertain
the periods of exacerbation and of remission because of the ignor-
ance of the patient or of his attendants, or because those periods
are not very strongly defined. In such cases we may safely pre-
sume that the remission, if there be any, will occur in the morning,
as this is most usually the case in these affections. And, under this
presumption, I always prescribe about 20 grs. of quinine to be given
in 5 grs. doses at intervals of two hours, commencing at the dawn of
the next day, without regard to any incidental circumstances. This
last injunction is added because without it, the attendant may upon
some trivial change assume the responsibility of omitting the remedy
at the only time when it might be given with decided advantage.
I have known several cases to terminate fatally by such omission to
carry out the prescription; the excuse being that the patient had too
much fever, or head-ache, or nausea, &c. We not unfrequently see
cases so late that the life of the patient depends entirely on our abil-
ity to prevent another paroxysm. No circumstance then must be allowed to interfere with the use of the only certain preventive with which we are acquainted. If it cannot be given in one form it must be given in another; if the stomach rejects it, throw it upon the rectum. At all hazards, give it. If by this course you happen to give the quinine before the remission have been fully established, it will not increase the fever, but on the contrary lessen its intensity, and consequently hasten the establishment of the remission. We frequently induce a very decided remission in cases in which it has previously been very slight, by the administration of quinine a short time after the fever has reached its acme of intensity, as may be seen by reference to the cases just related.

Having thus far restricted my remarks to the use of quinine in fevers uncomplicated with true phlegmasia or inflammation, it is proper that I say a few words in relation to cases we occasionally encounter, in which genuine phlegmasia are complicated with remittent fever or the paroxysmal peculiarity. I allude now specially to the form of Pneumonia and Pleuro-pneumonia which has prevailed more extensively in Georgia and South Carolina, (and perhaps in other southern states) during the last year or two than formerly, and which has been attended with an extraordinary degree of mortality. From what I have seen of such cases, and learnt from my professional brethren here, and elsewhere, I am satisfied that whilst the most striking element of the disease is an inflammation of the pulmonary organs, this is complicated with remittent fever. Indeed they present regular diurnal or tertian exacerbations and remissions of such decided character as to mislead the friends of the patient, and even his physician, into a degree of security which has often proved fatal. Seized with a violent attack of pneumonia, the patient finds himself at once quite ill, but is soon relieved from anxiety by an apparent amelioration of his condition. This continues until the next day, or perhaps the third, when another exacerbation supervenes and rapidly aggravates the condition of the lungs; but the intensity of the symptoms again abates, and the patient is flattered with the hope of approaching convalescence, until a repetition of the paroxysmal affection places his life in imminent peril, if not beyond the reach of remedial means—and all this notwithstanding a vigorous antiphlogistic course of treatment. This disease has been particularly fatal on our plantations, where the daily or tertian amendments of the patient have induced the owners or overseers not to call in medical aid as early as they would have otherwise done.
In all the cases of pneumonia, complicated as above stated, that have come under my observation, I have not hesitated to combine the use of quinine with that of the lancet, antimonials and opiates, and have uniformly had every reason to be entirely satisfied with the result. They do not require, nor can they bear, the same amount of depletion usually regarded as necessary in common pneumonia and pleurisy, and they very rarely yield to antiphlogistics alone. In furnishing my own testimony to the efficacy of the suggested combination, I might add that of other practitioners of distinction, who, entertaining the same views with myself, have met with similar success. It is scarcely necessary to add that the quinine should be given during the periods of remission, and as liberally as though there were no organ in a state of inflammation.

I have now freely and without reserve, given my views in relation to the use of quinine in our remittent fevers—and in lauding, as I have done, its efficacy, I cannot but apprehend that the charge of ultraism will be preferred against me by those who are still unacquainted with its properties. Be this as it may, I fear nothing from the test of time and experience, and will be amply compensated for the temporary odium, if this article will induce any who may have been backward in the use of quinine to give it a fair trial under the circumstances here recommended. It should be borne in mind, however, that we occasionally meet, even in this latitude, cases of typhoid fever, or of enteric fever, in which quinine possesses no peculiar efficacy. But these fevers do not present the paroxysmal type, and can therefore be easily distinguished from those in which it is useful.

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**ARTICLE II.**

*The propriety of large doses of Calomel in Dysentery and Cholera Morbus.* By W. F. Barr, M.D., of Greenville, Tennessee.

If we examine the standard works upon practice, in the treatment for dysentery and cholera morbus, we find small doses of calomel, in combination with opium, recommended. For reasons which will be made known, I have been induced to depart from this mode of treatment.

In endeavoring to give the reasons for this deviation from a system, recommended by some of the first men in the profession, it will be-
come necessary to speak first, of the influence of the bile upon the intestines; secondly, of the pathology of these diseases.

The influence of the Bile upon the Intestines.—From time immemorial to the present period, the opinion has been entertained that the bile acts as a stimulant upon the intestines, and thereby keeps up regular peristaltic motion. A denial of this opinion may appear, to the minds of many, as heterodoxical; but fair reasoning, founded upon truth, ought to satisfy the most sceptical.

The bile is not a stimulant, but a sedative; and to its sedative influence the intestines owe their healthy action and regular peristaltic motion.

Although many contend that the bile is a stimulant, and that it is to an increased quantity in the intestines, which causes them to become excited, yet we find many others, equally as learned and experienced, asserting that such a condition is owing to a deficiency of bile. This, then, is our opinion: from sudden suppression of perspiration, the influence of malaria, cold, vicissitudes of weather, &c., the liver becomes torpid, and, consequently, there is a deficiency in the quantity of bile. The intestines thus being deprived of an accustomed sedative, are excited, and irregular and diseased action are the consequence.

This is proven from the fact, that in the early stages of the diseases spoken of, the stools are not of a bilious color, but white, pale, &c.; and that in the treatment dark, or bilious discharges are hailed as ominous of improvement. Now, if this excited condition of the intestines be owing to too great a quantity of bile, why are dark, or bilious colored discharges looked for with such anxiety? To believe that the bile acts as a stimulant, and that it is owing to the presence of too great a quantity of this stimulant, and then use medicines to make the discharges of a bilious colored, seems too much like curing a burn by placing the person injured in the fire!

In those diseases in which the intestines are in an excited condition, and the stools are of a pale or white color, their recovery to a dark or bilious color, (at which time there will be an improvement,) proves, incontestibly, this excited condition is owing to the absence of the bile, and that when restored, its action as a sedative allays the irritability and excitement. From these facts, we contend that the bile is a sedative.

Pathology of Dysentery and Cholera Morbus.—Believing that the bile is a sedative, we contend that the excited condition of the intes-
tines in these diseases is owing to the absence of the bile—to the abstraction of an accustomed sedative.

Treatment.—Entertaining the views advanced in relation to the influence of the bile, and the pathology of dysentery and cholera morbus, the main and important indication to be fulfilled, is to procure, or increase the secretion of bile, in order to have its sedative influence to allay the excitement of the intestines. To accomplish this object we give calomel in large doses. We know there is no remedy which acts so certainly and powerfully upon the liver as calomel. If, then, we wish to increase the quantity of bile, shall small or large doses of the article which we know will accomplish our object, be given! Although Dr. Eberle, in his system of practice, contends that in cholera morbus there is a deficiency of bile, yet he recommends calomel in two grain doses. But, under this opinion, is such practice correct? This can be answered, by referring to efforts to excite any secretion. If, for instance, we desire to increase the flow of saliva, will a small or a large quantity of an article be taken in the mouth? Would not every one use a large quantity? Upon this principle of reasoning, we argue,—in these diseases we wish to increase the secretion from the liver,—then, of course, we would not recommend a small dose of the remedy we know will do so, but rather a large one. Therefore, in dysentery and cholera morbus, where there is deficiency in the quantity of bile, we wish to increase it,—for which purpose we give large doses of calomel. In those cases which I have attended, I have administered it not in larger doses than 20 grains, though the quantity should be modified, or increased, according to circumstances. I give 20 grains every six hours, until the stools become dark and fetid.

Case. Mr. M. had been confined some ten or twelve days with dysentery. When I saw him he was very pale, pulse small and weak, tongue furred, disagreeable taste in the mouth; the discharges were frequent and painful. I prescribed calomel in 20 grain doses every six hours until the discharges were dark and fetid. He took but two doses, which had the desired effect, and in two days he was able to attend to his business.

Other cases of both diseases could be given, but it is deemed unnecessary, as the treatment and results were the same as the one given.

I have endeavored to be brief, but it is thought enough has been said to convince any one.
It is due to the learned and talented professor to say, that for the above views I am principally indebted to Dr. Cross, formerly Professor of Institutes in Transylvania University, but now of Memphis Medical College. Although Dr. Dick, in his treatise "On the Organs of Digestion," advances the opinion that the bile "has a sedative effect on the intestines," yet to Dr. Cross is the credit to be given for having first advanced the opinion and taught the doctrine, and also having recommended the practice which should be pursued under this theory.

ARTICLE III.

A Fatal Case of Mechanical Obstruction in the Bowels, (conglomeration and adhesion of the ileum above a reducible hernia,) with the post-mortem appearances. By Paul F. Eve, M. D., Professor of Surgery in the Medical College of Georgia.

The frequent occurrence of obstinate constipation, and too often unfavorable termination in such cases, give an importance and interest to the subject, which should lead every honest and candid physician to record and publish every thing he may meet with in his practice bearing upon this point. The writer is aware there is nothing very peculiar in the case he is about to report, but it will be adding another fact to the many causes producing obstruction to the bowels, and even to a fatal extent; and it may besides possess some novelty and interest.

Thomas Newell, aged 30 years, entered the Augusta Hospital on the 14th November, for constipation of the bowels; having had no evacuation from them since the 10th. He was a laborer on the Augusta canal, had had intermittent fever during the fall, and some time ago was attended by a physician for some difficulty in urinating. From his wife I learn, since his death, he was ruptured, but had never worn a truss. In his last sickness, catheters or bougies, or probably both, were used. From sickness in my own family, Dr. Garvin visited this patient for me the afternoon of the day he entered the hospital, and prescribed 15 grs. calomel, to be taken at bed time.

Sunday, 15th. Had, in addition to the calomel, taken a dose of castor oil before visited. Complains of soreness and pain over the abdomen, has no fever, borborygmus, considerable tympanites, with
eructations and anorexia. Prescribed a large warm mustard poultice over the abdomen, and salt-water injections, to be administered at once. In the evening, no relief being obtained, the long stomach tube was added to the glyster pipe.

16th. Was called to patient. Has now copious stercoraceous vomiting; indeed the quantity ejected was enormous. Has had little or no evacuation downwards from the intestines. A concealed inguinal hernia of the right side was now detected, but it was reducible, and had no symptoms of inflammation or strangulation. The patient, though asked, never located his sufferings in this part of the abdominal contents. The finger in the rectum, pushed high up, met with resistance towards the bladder, offered apparently by the intestines impacted in the pelvis. Difficulty being experienced in passing the tube into the colon, the patient was placed upon his elbows and knees, and it then entered much easier. Cold water was freely injected, with a view to condense the flatus. It was returned with but little faecal matter. Melted lard was now freely given in half pint doses, and was retained for some hours. At the evening visit, a blister to cover the abdomen was put on, and when it acts, a drop of croton oil is to be given every hour.

17th. Patient is worse. Took eight drops of the croton oil without any relief. Dr. Ford called in consultation. Table-spoonful doses of pulverized charcoal were given. Injections still continued. Wine and good nourishment ordered.

18th. Vomits still occasionally—is much weaker—has hiccups at times. The blister has acted well. No increase, but diminution of tympanites. The hernia descends whenever he assumes the position to evacuate the enemata, but is restored by pressure. Recommended still to use the long injecting tube with warm water or stimulating fluids, and such nourishment as the stomach would bear.

19th. Died at 4, P. M.

Post-mortem at 8, A. M., on the 20th, by Dr. Campbell, Demonstrator of Anatomy, and in the presence of the medical class.

No great emaciation. Blistered surface over the entire abdomen. No great distention of it. Removed the anterior abdominal wall. The small intestines, particularly the ileum, were distended and were very red, near the cæcum of a dark, approaching to a black color, and seen through the peritoneum. The hernial sac was laid open, and a small knuckle of intestine found occupying it. This sac was quite thick, much condensed tissue forming its parietes. The pro-
truding viscus was loosely attached to its internal surface by recent exudation of plastic matter or fibrin. These attachments were readily broken up, and the hernia was reduced. The sac was of ancient formation, but the agglutination of the intestine to its internal face was recent. The hernial tumor was a portion of the ileum, about four inches above its termination at the ileo-cecal valve. It was gangrenous, and the same condition continued up for several inches in this intestine, which was found convoluted and agglutinated, and formed an irregular tumor as large as a common sized apple pressed down into the pelvis. The adhesions of this portion of the ileum were firm, and required the knife for separation. They were evidently ancient, and not the result of the attack from which the patient died. There were neither recent affusions of much serum or of any fibrin, (except that mentioned in the hernial sac,) or other symptoms of peritonitis. Some eight to twelve inches of the ileum constituted this mass or ball. The internal surface of the obstructed portion was gangrenous, and its mucous membrane detached at places by ulceration or mortification. Its calibre could not well be judged of, as the adhesions had previously been divided, before laying open the intestine, but their conglomeration amounted to a perfect stricture, judging from the accumulation of flatus and fluids above it. The ileum contained a muddy, semi-faecal or semi-purulent matter, besides flatus. The rectum and colon were much contracted, emptied by the injections.

This patient then evidently died from an obstruction in the bowels existing above the reducible hernia. The adhesions of the ileum may have occurred at the time of the difficulty he experienced in his urinary apparatus, for they were situated just above, if not upon the bladder, and the complete stricture of which he died on the 19th, was superinduced upon this condition of the parts on or about the 10th, probably by some imprudence. The hernia of itself had nothing to do with his death directly.

Knowing a hernia existed in this case, the operation of Callisen or Littre, recently revived, and one of them performed successfully by Amussat, was not proposed.
PART II.—REVIEWS AND EXTRACTS.

ARTICLE IV.

Researches upon the Blood. By M. Dumas. (Translated for this Journal, from the August number of the Annales de Chimie et de Physique: by Jno. M. B. Harden, M. D., of Liberty Co., Ga.)

The blood contains three nitrogenized organic principles which are essential to its nature and its functions, viz., fibrine, albumen, and the red globules. Their abundance in the blood or the importance of their offices has long drawn to them the special attention of chemists and physiologists.

But if it has been a very easy matter to separate the fibrine from the blood by the simple process of beating (battage) after obtaining it from the vein; or no less easy to procure the albumen by allowing its serum to separate by spontaneous coagulation; this is not the case when we wish to obtain the red globules free from all fibrine and albumen.

Recently, however, a peculiar process first pointed out by Berzelius, and afterwards more fully developed by M. Muller, has suggested to MM. Lecanu and Figuier* a method of obtaining the globules free from all mixture. This method is founded upon a modification which the blood undergoes, by its admixture with certain salts, in its transmissibility through the pores of our filtering paper. If we pour some blood, which has been beaten and deprived of fibrine and consequently fluid upon a filter made of Joseph paper, we see the globules of this blood pass through the filter, and the filtered fluid will be of a deep red color. The filtration, which in such a case is slow and tedious, leaves upon the filter nothing but a residue of globules, altered in appearance and so small in quantity as to render it impossible to study their properties.

But if, before filtering the blood, we mix it with three or four times its volume of a saturated solution of sulphate of soda, this mixture will so modify the properties of the liquid in which the globules float that it passes through the pores of the paper, leaving behind all the globules upon the filter. It drains off completely colorless and altogether limpid, and as the process is generally rapid the globules may be collected in a satisfactory state of purity and integrity.

The application of this process, however, is not devoid entirely of some difficulties, which are worthy of attention, because of some circumstances connected with the nature and office of the red globules which they make manifest.

For example, if we take blood deprived of fibrine, but kept for many hours, and attempt to filter it after the addition of even an increased

* An interesting paper upon this subject, from the pen of M. Figuier, may be found in the 11th vol. of the Ann. de Chimie et de Phys., page 503.
quantity of sulphate of soda, the fluid passes with difficulty and is always colored.

It is necessary, therefore, that we operate upon blood recently drawn from the animal. As soon as it has been well beaten and all the fibrine is coagulated, we should pass it through a fine piece of linen and receive the fluid into a solution of the sulphate of soda. The mixture being now thrown upon a filter, we obtain a fluid perfectly limpid with a slightly yellowish tint, and all the globules will remain upon the filter.

But soon, however, the liquid which has been drained off being replaced by a fresh solution of the sulphate of soda for the purpose of washing the globules, we see it pass through colored, feebly at first, afterwards a little more so, and, at last, the color becomes so deep that we cannot doubt that the globules have been greatly altered in their properties.

Yet it is necessary, in order to obtain the globules pure, to wash them many times with the solution of the sulphate of soda—without which they will remain impregnated with the serum of the blood, that is to say, with an albuminous fluid whose presence will entirely conceal their true characters.

After a good many useless attempts, I have found in the globules of the blood a remarkable property by means of which this difficulty may be avoided.

As long as the globules of the blood are in contact with air or aerated water; as long as, in one word, they are in the arterial state the solution which contains them passes colorless through the filters and leaves them all behind.

But, on the contrary, as soon as these same globules have taken the violet color which characterizes venous blood, the filtered fluid becomes colored.

It is necessary, therefore, to maintain the globules in the arterial state during the continuance of the filtration and the washings. This I have been able to do in a satisfactory manner, by plunging into the filter a slender tube, by means of which I direct a constant and rapid current of air through the fluid.

Thus treated, the globules are deposited with some difficulty from the fluid, which is now maintained in a state of aeration favorable to the permanence of the arterial condition.

I throw, therefore, upon a large filter moistened beforehand with a solution of sulph. soda, the blood just after its passage out of the vein, but deprived of its fibrine, and diluted with a solution of sulph. of soda—a continual current of air passes through the liquid which is contained in the filter—a tube connected with a solution of the sulphate of soda supplies continually the loss of the fluid which is drained off.

By means of these precautions, the globules of the blood may be completely separated from the serum. Nevertheless, when we wish
the operation to succeed, it is necessary to neglect nothing that can ensure its rapid execution.

As soon as the globules have had time to be deposited upon the sides of the filter, and form there a layer of sensible thickness, those which are in contact with the surface of the paper cannot be longer acted upon by the air and pass immediately to the violet, whilst those which make up the exterior layer preserve the arterial state, and evidently arrest all the air contained in the washings.

In consequence of this the fluid passes colored, and if we do not immediately remedy this difficulty, its increasing coloration will soon demonstrate that the globules have undergone a great alteration.

Under these different circumstances the globules of the blood behave as if they were truly living beings, capable of resisting the solvent action of the sulphate of soda, as long as their vitality continues, but yielding to the action as soon as they become asphyxiated, which results in this case from a deprivation of air, and which is manifested with singular rapidity, either by a change of color, or by their prompt solution.

Hence the object of the chemist must be to preserve the vitality of the globules, and among the means which present themselves to the mind we may mention the agitation of the fluid, its constant aeration, and lastly, the keeping of the blood at the same degree of temperature at which it was found in the body of the animal.

All these precautions being followed, we are furnished in a few hours with pure globules, provided we do not undertake to prepare more than five to six grammes at one time.

This rapid alteration of the globules, as soon as they are deprived of the direct contact of air, or of aerated water; the extreme energy with which, in a layer of globules, those which occupy the surface appropriate to themselves the whole of the oxygen, causing a fluid to pass to those below, which is entirely unfit to arterialize them, are circumstances well calculated to fix the attention of physiologists.

In the discussions in which the respiration has been the object of our inquiries, the blood has always been regarded as a homogeneous fluid, receiving the contents of the air in the lungs, and undergoing there more or less rapid alterations.

Doubtless the serum of the blood does constitute such a fluid, nor will I dispute the part which it may take in the phenomenon of respiration; but the globules of the blood compose so many vesicles floating in this serum, having a respiration peculiar to themselves, whose effects, connected with those resulting from the respiration of the serum, produce by their ensemble the general phenomenon of the respiration of the blood.

We may say, therefore, laying aside for the present the proper action of the serum upon the air, that the respiration of one of the superior animals, and particularly of man, has for its object the contact of oxygen with the globules of the blood and the expulsion of the products into which they are converted.
Researches upon the Blood.

Hence, if we wish to calculate the effects of respiration, we must take into consideration the membranes which form the envelope of these globules, for we know how very different from a pure and simple solution of a gas are those strange phenomena of endosmose which take place through membranes which separate two reservoirs filled with different gases, or with fluids saturated with these gases.

Respiration, in order to be well understood, must therefore be studied in these vesicles or blood-globules, the principal seat of those phenomena which it is destined to produce, and whose organization complicates so strongly the physical laws which govern it.

The manner in which these blood-globules act upon the surrounding or dissolved air, and the conditions under which they preserve their normal character, become, when thus regarded, subjects of the highest interest.

To determine the integrity of the globules and the existence of their fundamental property, we have two means, both of which are equally exact, the microscope and the agitation of them with oxygen—as long as the globules are entire the microscope will indicate it: as long as they may be arterialized they will redden in contact with oxygen.

Now everybody knows that the blood possesses these two characters whilst it is circulating; nor does it lose them after its escape from the animal. The beating of the blood, by which the fibrine is separated, does not injure the globules nor deprive them in any way of the property of becoming arterialized.

In this phenomenon the albumen is no more needed than the fibrine. When we gradually replace the serum in which the globules are suspended, by a solution of sulphate of soda, they preserve no less their integrity, and they become no less reddened by being agitated with oxygen.

Thus the faculty of assuming the brilliant color of arterial blood belongs to the globules; it is independent of the albumen, of the serum, of the fibrine of the blood, and of the vital action of the animal.

But if the sulphate of soda preserves this property of the globules, will this be the case with all the alcaline salts? By no means—experiment proves this.

The common phosphate of soda which exists in the blood, may, like the sulphate, saturate the blood without in the least destroying in it the property of becoming arterialized. Blood saturated with phosphate of soda, when agitation with oxygen, receives a brighter arterial tint than it would have done without it.

In regard, therefore, to this property at least, the blood may without inconvenience have added to it much larger quantities of the sulphate or phosphate of soda than it naturally contains.

The salts formed from the organic acids, such as the salt of Seignette, are similar in their effects, which leads us to believe that the lactate of soda may exist in the blood, even in large proportion, without producing any ill effects in this respect.
But is this the case with common salt or chloride of potassium? Experiment shows that these salts are altogether different in their effects.

If we saturate blood deprived of fibrine, although fresh, with common salt, and agitate it immediately with oxygen gas, it remains of a sombre violet hue. Sal ammoniac produces the same effect.

Does there not exist an intimate connection between these phenomena and the supposed injurious effects of salted meats in the production of scurvy? Must we not also find some agreement between the action of sal ammoniac, upon the blood, and the poisonous properties of this and other ammoniacal salts upon the body?

But however this may be, it is certain that there are some salts which leave the blood the property of becoming arterialized, whilst there are others which entirely destroy this property. The sulphate and phosphate of soda and the salt of Seignette belong to the first division; the chlorides of potassium, sodium, and ammonium to the second.

With these results, there is one circumstance connected which cannot fail to arrest our attention. Those salts which maintain in the blood the property of becoming arterialized, are at the same time the best adapted to preserve the integrity of the globules, and they give it the property of furnishing a colorless serum by filtration. On the contrary, those which take away this property cause the filtered serum to be more readily colored.

The whole of these experiments lead us to believe that the coloring matter of the blood is peculiarly fitted to take on the characteristic tint of arterial blood, when it is connected with the globules themselves, of which it forms a part. This character is modified, or lost, when by the alteration or destruction of the globules, the coloring matter enters truly into solution.

By comparing with great care specimens of the same blood, brought into contact with alcaline salts, and allowed to be saturated with these salts in the cold—it appears to me that generally these saline solutions, agitated with oxygen, act in the following manner:

Those salts containing complex organic acids, as the tartaric and citric, preserve the integrity of the globules much better than the salts formed from the mineral acids.

Those salts which have soda for a base, are better fitted to maintain this integrity than those with potash or ammonia as the base.

There appears, therefore, to exist an unexpected relationship between the integrity of the globules, the arterial state of the blood, the phenomena of respiration, and the nature or the proportion of salts dissolved in the blood.

It requires only a few experiments of this kind to be convinced that asphyxia may be induced in the midst of air, or of oxygen gas, without any apparent change in the phenomena of respiration, by the simple introduction into the blood of those salts which modify the action of the oxygen upon the red globules.
We cannot but call the attention of physicians to this order of phenomena. At a time when the analysis of the blood attracts with so much reason their regards, it is to be hoped that the study of the globules, in certain well understood diseases, should become the object of peculiar investigation.

Every thing leads us to believe that, in their less or greater, and slower or quicker alterability, there exist degrees which may be ascertained and measured by receiving the blood from a vein into a solution of sulphate of soda, for the purpose of subjecting it to different trials, or even after defibrinization, by attempting to alter it by graduated doses of well chosen salts, such as common salt (chloride of sodium), or sal ammoniac (chloride of ammonium).

The greater or less resistance of the globules to the alternative operation of these salts, would furnish indices which nothing could replace at present in our diagnosis of Diseases of the Blood.

The elementary analysis of the blood globules, when once they are isolated, is so easy that I have been able to go through it with full confidence in the results. The globules of the blood, deprived of serum and collected on a flat dish, placed in the vacuum of an air-pump on which is pure sulphuric acid, yield in a short time a residuum perfectly dried. This, treated by ether and alcohol, at the boiling points, becomes insoluble in water which may now be used to remove any sulphate of soda remaining in the globules. It is after this preliminary treatment that I have made an elementary analysis. The following are the results, neglecting the ashes:

<table>
<thead>
<tr>
<th>GLOBULES OF BLOOD,</th>
<th>Of a Female.</th>
<th>Of a Dog.</th>
<th>Of a Rabbit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon,</td>
<td>55·1</td>
<td>55·1</td>
<td>55·4</td>
</tr>
<tr>
<td>Hydrogen,</td>
<td>7·1</td>
<td>7·2</td>
<td>7·1</td>
</tr>
<tr>
<td>Nitrogen,</td>
<td>17·2</td>
<td>17·3</td>
<td>17·3</td>
</tr>
<tr>
<td>Oxygen,</td>
<td>20·6</td>
<td>20·4</td>
<td>20·2</td>
</tr>
<tr>
<td></td>
<td><strong>100·0</strong></td>
<td><strong>100·0</strong></td>
<td><strong>100·0</strong></td>
</tr>
</tbody>
</table>

It appears evident from these analyses, as we may have concluded from their properties, that the red globules belong to the family of albumenoid bodies. If the carbon which they contain is a little greater than that of casein and albumen, it is because in the red globules there exists a coloring matter which accounts for this excess.

I will examine, however, in a subsequent memoir, the question, whether the matter of the red globules may be confounded with albumen or casein, or whether, as appears probable, it may not be distinguished from these substances altogether, as well as the fibrine itself.
History of Seven Cases of Traumatic Tetanus, treated successfully by Strychnine. By J. W. Fell, of New York.—(New York Journal of Medicine.)

Dear Sir:

In compliance with your request, I herewith furnish you with the histories of seven cases of tetanus (six of them certainly traumatic, and most probably the seventh), which have been treated by strychnine with success. The first two were published in the New York Medical and Surgical Reporter, but as they will be more interesting in connection I send them to you. The 6th case was furnished me by Dr. Botsford, the 7th by Dr. Vanderpool, of Fourth-street.

You will observe that in every case, as soon as the specific twiching was produced, the tetanic spasms abated, and they convalesced rapidly. I have found this distress over the diaphragm (caused, no doubt, by its spasmodic contraction) the most troublesome symptom in all the cases.

I would, from the experience I have now had, administer the strychnine as follows. I should at once give an eighth or tenth of a grain, then, in two hours, the sixteenth, then reducing the dose just sufficient to produce its effect after each one. The great object is to produce the twichings as soon as possible, they can then be kept up by a much smaller dose than the one which first produced them.

Hoping they will meet your approbation,

I remain yours very truly,

New York, Oct. 9th, 1845.  J. WELDON FELL, M. D.
Doctor Lee.

On the use of Strychnine in Tetanus.

Case 1.—Aug. 1st, 1845. Visited William Ellsworth, aged 7 years, living with his parents, in Hudson county, New Jersey. Found him in a kind of stupor, but upon his father’s taking hold of him, he was thrown into a violent spasm which lasted a few minutes, during which his body was curved backwards, jaws set, countenance distorted, and his body resting entirely upon his head and heels. After the spasm ceased, he complained of pain and distress over the diaphragm, jaws stiff, and almost closed, difficulty in swallowing, pain along the spine, and soreness in the left groin. The spasms were excited by touching him, or by his attempting to swallow. During the spasms the muscles were so rigidly contracted that he could be raised by his head alone.

About ten days ago he injured his left knee with a thorn. While playing a few days after, it commenced swelling, and to be painful; but by the application of some domestic remedies, the swelling was reduced, and the pain allayed. Soon after he became restless and uneasy, complained of distress about the precordial region, pain in the masseter and temporal muscles; his voice changed, he had difficulty in swallowing, and these symptoms were attended with slight
fever. These symptoms increased until yesterday, when the characteristic spasms of tetanus set in. His mother immediately applied a blister to the knee and one to the spine. The glands in the left groin were enlarged and tender.

The case was evidently one of traumatic tetanus, well developed and rapidly advancing, and demanding the most vigorous treatment. I at once determined to administer some one remedy, and to continue its use until some decided effect was produced by it. I reviewed in my mind the many remedies heretofore used, viz., opium, alcohol, turpentine, iron, digitalis, tobacco, aconite, &c., &c., and knowing they had all failed, in the majority of cases in which they had been used, I, from a suggestion of Professor Mott’s, during the previous winter, determined to use the strychnine, and at once prescribed it in doses of the fourteenth of a grain, every two hours. I also ordered a poultice to the knee, and the spine to be rubbed with ungu. tart. antimon. The strychnine produced its peculiar twitching effects after the fifth dose. It was given as above for two days, each dose after the fifth producing the specific effect. The intervals between the doses were now increased, until, on the sixth day, he only took it three times. He had no spasm after the second day; he convalesced slowly, until the sixteenth day, when the strychnine was discontinued, as he had entirely recovered.

I have frequently seen his father since, and he informs me the boy has enjoyed perfect health.

Case II.—Oct. 4, 1846, 10 o’clock, P. M. Was called in haste to see Miss M——, of Sullivan street, aged 25 years, under the care of Dr. E. Vanderpool. Found her in a spasm; the muscles of the left side only being in a contracted state; jaws set, left leg and arm stiff, body bent to the left side, extremities cold, pulse feeble, and left side of the face distorted. Ordered some wine, as soon as the spasm passed off, and she could swallow. Dr. Vanderpool having been at once sent for, now arrived, and gave me the following history of the case. Miss M. had been suffering for several months with a bad toe, the nail of the great toe of the left foot having grown under the flesh. She had not been out of the house for months, she refusing to have the nail removed. A few days ago, however, she consented, and Dr. Vanderpool removed a part of the nail; the next day she went out riding, and directly after her return, the toe commenced swelling, and to be very painful, the pain extending up the leg, side, arm, and soon affecting the temporal and masseter muscles of the left side.

Dr. Vanderpool and myself examined and found the toe and foot much swollen and tender, the lymphatic glands of the left groin enlarged and painful, the muscles of the left side contracted, jaws stiff, but not entirely closed, difficulty in swallowing, masseter and temporal muscles contracted and painful, and uneasiness about the precordial region; during the spasm the diaphragm was powerfully contracted. Considering this also a case of traumatic tetanus, I
suggested to Dr. V. the use of strychnine in this case; he preferred, however, waiting until morning. He made a free incision upon the toe, and prescribed the following:

R. Tinct. Assafetidae 1 a teaspoonful every two hours.

" Opii aa 1 ft. pill no. xv. one every two hours.

10 P. M. Strychnin. gr. jss. Ext. Juglandis C. 3 ss. ft. pill no. xvj. one every two hours.

10 P. M. Was called in haste to see the patient, as her friends thought her dying. We found her under the specific effect of the strychnine. Ordered the pills discontinued until morning.

Oct. 6, 10 A. M. The patient slept well from 12 to 4 o'clock this morning, being the first sleep she has had in some days. She is much improved—ordered one pill every three hours.

7 P. M. Has had some slight spasms during the day; jaws a little relaxed; gave her wine whey, to be continued as above.

Oct. 7. Miss M. slept well during the night, and the irritability which had been so marked, has in a great measure disappeared. The twitching is produced by each pill: it commencing about twenty minutes after taking the pill, and lasting about fifteen.

Oct. 8. No spasm since yesterday; ordered one pill every six hours; continue the wine whey.

Oct. 9. Discontinued the pills, as the tetanic symptoms have all disappeared.

Oct. 16. Miss M. is going out as usual, quite well.

The only peculiarity about this case, was the contraction being confined to the left side, making it a case of Pleurosthotonos.

CASE III.—Nov. 15. Visited Mrs. J., of Thompson street, aged 27 years. About ten days ago she ran a needle into the palm of her hand; it breaking, a piece was left in the wound. This was removed by a barber in the vicinity within a few days; but the hand and arm continued sore and painful. Yesterday she complained of having taken cold, as her jaws were stiff and deglutition painful. During last night she had hot flushes and chills. I found her complaining of difficulty of swallowing: jaws very stiff, and nearly closed: pain and distress in the diaphragm, and some slight spasms. Ordered the following:

R. Strychnin. gr. j. Ext. Juglandis 3 ss. M. in pill nos. xiv—one every two hours, the hand to be bathed frequently in hot water and ashes.

Nov. 16, 9 A. M. The third pill produced the twitching. This so much alarmed the family, that they have discontinued them since. I immediately ordered them to be given again. They produced the twitching in about ten minutes, it lasting sometimes as long as half an hour.

4, P. M. Patient some better, still slight spasm.
Nov. 17. Has had no spasm since yesterday: the swelling in the hand and arm is much reduced: still painful. Ordered a pill every four hours, and a poultice to the hand.

Nov. 18. The patient slept well last night for the first time since she has been unwell. Jaws relaxed. One pill every six hours.

Nov. 19. Patient about the house as usual. Arm stiff. Ordered two pills per day.

Nov. 21. Each pill produces the twitching; but as the patient has completely recovered, I ordered them discontinued.

The hand now did well, and healed rapidly.

Case IV.—May 9, 1846, 8 o'clock, P. M. Thomas Brown, of Hoboken, New Jersey, called at my office, and requested me to visit his sister-in-law, Miss Jane Savage, aged 16 years, then at his house, suffering with lock-jaw. On my arrival at his house, I learned that Dr. Julien had been in attendance. I at once had him sent for, and upon his arrival we visited the patient. Upon our entering the room she was thrown into a violent spasm, which lasted about a minute, during which her body was bent backward, resting upon her head and heels, her countenance distorted, and her pulse quick and irregular. After the spasm passed off, we found her jaws were entirely closed and set: pain along the spine, and over the region of the diaphragm: difficulty of deglutition and respiration, and her pulse still quick. Learned the following history: Some days since she ran a carpet-tack into her right thumb; soon after she took a cold in it while washing. It commenced swelling and to be painful. It grew worse until about forty-eight hours since, when she was seized with the tetanic spasm. Dr. Julien was then sent for: he bled her, and ordered counter-irritation to the spine. This morning she was worse, the spasm more frequent and severe. He ordered an injection, and invited Dr. Hosack to see her. They visited her at 12 M., and at once ordered her to take large quantities of Sherry wine and arrow-root, and a poultice of herbs to the spine, but as she has a very regular set of teeth, and her jaws being set, and as it is very difficult for her to swallow, it was almost impossible to give it, up to the present time, and about nine o'clock P. M., her mother informs me that she has taken about a wine-glassful of the wine and arrow-root. The patient is evidently growing worse. I informed Dr. Julien of the result of the three preceding cases, and advised the use of the strychnine in this. After due consideration he wrote as follows: R Strych. gr. j., Spts. Vin. Rectf. 5j. M. :—Of this 30 drops to be given every two hours. The strychnine was procured and the first dose given, at half-past ten, P. M. In about fifteen minutes the twitching commenced: it lasted about twenty: the patient then fell asleep. At half-past twelve she took the second dose, with about the same effect, again falling asleep. She continued to take the drops every two hours, until twelve o'clock M., Sunday.

Sunday, May 10. The patient, at eight o'clock this morning, sat up in the bed and fed herself with a tea-spoon, her jaws having re-
laxed very much, and the spasms almost ceased. A 12 M., Drs. Julien and Hosack called, and from some cause, carried the strychnine away with them, giving as a reason to the family that it would injure her health ever after, if she continued to take it. They then ordered her (now she could swallow) to take a gallon of Sherry wine a day; and said she would certainly recover. At 9 P. M., Mr. Brown called at my office, and communicated the above to me; he also said Jane had eaten a piece of beef-steak just before he left home. He asked me to give him a prescription for another bottle of the strychnine, as he was satisfied it had produced the great change in the patient. I did so, with directions to give it as before, if there was a return of the spasms. But as they did not return, the drops were not given.

Dr. Julien continued to visit the patient, and ordered the wine to be given in large quantities for some days.

May 16. I visited Miss S. to-day, and found her in a state of intoxication. I at once advised the wine to be discontinued.

June 10. Mrs. Savage and her daughter Jane called at my office to-day. Jane is in a complete state of fatuity. Dr. Julien has been treating her for some days without any benefit. Mrs. S. now wished me to prescribe for this difficulty. I, with the advice of Professor Mott, put her upon a course of Sub. Mur. Hydarg., and applied counter-irritation to the back of the neck. This course was pursued until it produced gentle ptyalism: this was kept up for about two weeks, with decided improvement.

June 28th. Mrs. S. and daughter called to-day. Jane has entirely recovered. She continued perfectly well, and was married September 20, 1846.

This was undoubtedly a case of traumatic tetanus from a punctured wound, yielding at once to the strychnine; but whether the wine or the strychnine produced the fatuity, I leave for others to decide. Why Dr. Julien carried away the strychnine (without consulting me) while the patient was improving under its use, I also leave.

Case V.—May 10, 1846. Visited Mrs. Andrews, of Robinson street, aged 55, under the care of Dr. Condit. Dr. Conger, Sen., having been called in consultation yesterday, found her suffering with completely developed tetanic spasms, occurring every few minutes, during which her body was bent backward, countenance distorted, violent contractions of the diaphragm, and jaws set during the remissions, her jaws were nearly closed, deglutition very painful and invariably exciting a spasm, pain and rigidity of the right temporal and masseter muscles: the head was drawn to the right side, and the right arm and shoulder painful, the glands in the right axilla swollen and tender. The patient, some time since, bruised her right elbow, but the pain ceased in a day or two and was forgotten. A few days since the right elbow and arm commenced to be painful, the pain extending up to the shoulder and side of the neck. She thought she had taken cold, and did not feel alarmed until the spasm commenced.
This patient had been bled, and had taken tincture opii, &c., &c. She however continued to grow worse to the present time. I suggested to the above named gentlemen the use of the strychnine. They at once gave their assent, and it was given in doses of one-twelfth of a grain every two hours. It produced its peculiar effect after each dose. She was also ordered injections from time to time, as her bowels would not move without it. On the next day the dose was somewhat diminished, as its effects were very powerful. The spasms ceased after the fourth day. This patient convalesced very slowly, her arm being weak and painful for some time: this, however, may have depended upon her age.

August 21. Called and found Mrs. A. had just returned from the country; she has quite recovered. I have called several times since, and she continues quite well.

Case VI.—This case occurred in the practice of a gentleman in Sullivan Co., N. Y., and as he has kindly furnished me with a history of it, I will insert it here.

"Dear Sir:—Miss — of this village, aged 14 years, robust and healthy, ran a piece of bone in the sole of her foot, about the last of October. There was a little irritation about the foot for three or four weeks after the reception of the injury, and two or three times during the period there was slight ulceration; but little pain was felt by the patient until about the time she was attacked by the tetanic symptoms.

"She had, however, from time to time, after the injury and previous to the tetanic attack, more or less 'stiffness and numbness' in the injured leg. She states, also, that at different times during this period, 'her leg was hot and had red streaks upon it'; these lasted a day or two and then disappeared. She had nothing but some slight domestic remedies applied, until her case became alarming by the spasmodic action.

"It had been my determination ever since reading the result of your cases published in the 'Reporter,' if called to a case of tetanus, to treat it with strychnine. When my attention was called to this case, I was destitute of this medicine, and none could be obtained in the vicinity; accordingly the case progressed for forty-eight hours before the remedy was obtained and administered.

"In the meantime, I pursued the following course: There were violent pain and spasms at intervals, commencing in the affected leg, and extending along the muscles on either side of the spine to the head and jaws, violent distress about the diaphragm, with considerable sympathetic fever.

"My first effort towards subduing the disease was making an incision with a bistoury, about an inch and a half in length, and of sufficient depth to thoroughly divide the plantar aponeurosis, which was wounded by the piece of bone. I then filled the incision with lint saturated with ol. terebinth. and a bread and milk poultice to be applied over it. I then used V. S. ʒxxvj. on the leg, and administered
the following: & Calomel, grs. xx., Jalap, xv., to be followed by sal. Epsom in two hours. After this had operated briskly and freely, I gave her a teaspoonful of Tinct. Opium every hour, with a view to subdue the spasms. After she had taken two or three doses, the spasms were somewhat relieved and the pain less. This true lasted four or five hours. She became worse, although the Tinct. Opium was continued as above; her body curved more backwards, her joints were set and the spasms more severe. The dose of Tinct. Opium was increased, but it failed to subdue the disease. By this time, I obtained the strychnine, and administered it with complete success; so soon as it produced its peculiar twitching effect, the spasm abated and the patient rapidly recovered: in a few days she was about as usual. The dose given was $\frac{1}{4}$ of a grain every two hours, at first, gradually increasing the intervals.

"Dear Sir:—I send you above a history of a case of traumatic tetanus I lately treated with strychnine. You are at liberty to make what use you please of it.

"In great haste, yours, &c.,

"To J. Weldon Fell, M. D. (signed) CLEMENT BOTSFORD.

"Bloomingburgh, Sullican Co., N. Y."

CASE VII.—This case was furnished me by my friend, Dr. E. Vanderpool, and although it was not so well marked as some, still I think that there can be no doubt of its having been an incipient case of traumatic tetanus.

"Dr. Fell:

"Dear Sir:—The case of tetanic rigidity you request a history of, though only partially developed, is, I think, sufficiently interesting to be published, as tending to commend the use of strychnine in this most alarming malady.

"The 2d of Sept., 1846, I excised an elliptical piece of the cutis, on the radial side of the metacarpal joint of the thumb of Mrs. — , in view of removing a cicatric from the point of a scissors with which it had been punctured some three months previously, in hope of curing a neuralgic condition of the arm, which had been thus produced.

"On the 10th Sept., 1846, just eight days after the operation, the wound having healed, a slight but permanent contraction of the arm was noticed, with rigidity of the flexor muscles, particularly the biceps, which was painful upon pressure. That night she was unable to sleep, from the uneasiness and increase of this rigidity involving the muscles of the neck and jaws, accompanied by a "violent cramp or drawing" in the region of the diaphragm on the affected side. These symptoms all became aggravated by attempting to extend the arm, or by any motion of the body, and produced great general distress, with nervous tremors, "shuddering and shaking" of the whole body.

"The arm fell on the inner side, as she expressed it, corded in its whole length. Next day there was a little abatement of the above symptoms, but on the 12th she became decidedly worse, the 'cramp and drawings' being more severe.
"Sept. 13th. I was sent for at 3, P.M. I found her sitting up; said she could not sleep on account of general uneasiness and a disposition to move the arm, which brought on an increase of the symptoms enumerated. On examining the arm, I found it a little, but firmly flexed; the biceps was contracted, cord-like, and hardened, and somewhat tender upon pressure. Slight rigidity of the muscles of the neck on the affected side, also a feeling of 'tightness' extending from her hand to her head. From the tetanic character of the symptoms, I at once prescribed strychnine in doses of $\frac{1}{16}$ of a grain, in solution, every two hours (when awake) with a sinapism to the biceps.

"Sept. 14, 10 A.M. Patient has slept well through the night for the first in some time, arm a little relaxed, otherwise as yesterday; continued the strychnine as above.

"7, P.M. No improvement; ordered $\frac{1}{14}$ of a grain of the strychnine.

"Sept. 15, 10 A.M. Patient has slept but little during the night; complains of the 'rigidity, tightness, and drawing' of her arm; her head is drawn down towards the shoulder of the affected side, with inability to extend the jaws to the full extent, and distress over the diaphragm; ordered her to take strychnine $\frac{1}{12}$ of a grain every two hours.

"7, P.M. Has had a few twitches, characteristic of the effects of the strychnine; a little yielding of the tetanic symptoms; continued the strychnine as above.

"Sept. 16, 10 A.M. Patient has slept well, general improvement, contracted muscles relaxing; has taken considerable nourishment, having been unable to do so for some days.

"17. Discontinued the strychnine, as the tetanic symptoms have all disappeared.

"From this time forward, the patient continued to mend rapidly, and by the 21st was perfectly well.

"Respectfully yours, &c.


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Insensibility during Surgical Operations produced by Inhalation.

In a recent No. of the Boston Medical and Surgical Journal, (Nov. 18th, 1846,) Dr. H. J. Bigelow drew the attention of the profession to the fact, that the leading surgeons connected with the Massachusetts General Hospital, had operated upon a few patients while in a state of insensibility produced by inhaling a new gas, said to be discovered, or invented, by Dr. Charles T. Jackson, a chemist, and Dr. Morton, a dentist of Boston. On the reception of this intel-
ligence here, a letter was addressed to Dr. Smith, editor of the above journal, offering to test the article before the profession and medical class of this city, upon patients in the Augusta Hospital. The following is the reply:

"Boston, Dec. 2, 1846.

Dr. Paul F. Eve:

Dear Sir—Dr. J. V. C. Smith has kindly shown to Dr. W. T. G. Morton, of this city, your letter of Nov. 23. It will afford Dr. Morton much pleasure to permit you to make trial of his discovery. He has written a letter to Dr. John C. Warren, of this city, requesting him to name the most respectable and charitable hospitals of the United States, and it is Dr. M.'s intention to give to such the free use of his discovery for the benefit of the poor. As soon as measures can be taken, such hospitals will be licensed. In order to use the article employed, it is necessary to have a proper apparatus which costs, with a quart bottle of the preparation, $25. If the hospital you mention desires such, and will render the above amount in a letter, it can have it to use for the poor, and you can employ it, to test the same to your satisfaction. We hope soon to effect arrangements whereby all the surgeons can avail themselves of its use. The discovery is of great value to the world. If you desire to use the same in your practice, I have no doubt Dr. Morton will give you an apparatus and license to do so for five years, for $100.

Yours, respectfully,

R. H. Eddy,
Attorney for Dr. Morton."

Surgical Operations with the aid of the "New Gas."

To the Editor of the Boston Medical and Surgical Journal:

Dear Sir—The two following cases, occurring in my practice during the past week, are of interest as supporting the claims to confidence of Dr. Morton's anodyne compound.

Case I.—Nov. 19th. An Irish girl, under 20 years of age, in attempting to step into the cars at Hamilton, while they were in motion, fell, with her arm upon the track, and had a compound, comminuted fracture at the elbow, from the wheel of the car. At about 9 in the evening, I amputated in the middle of the humerus. The operation lasted a little longer than if done by daylight, although it was a flap operation and quickly executed. Three vessels were tied. Dr. Fisk, dentist, of this city, accompanied me and caused the patient to inhale the vapor of the compound, about three minutes before the operation commenced. By this time she appeared to have yielded entirely to its influence, and became pale, silent, and perfectly passive and manageable, whereas she had before exhibited evidence of great physical suffering and uncontrollable grief. Before the arteries were all tied she appeared to be returning to consciousness, when, on offering the apparatus to her mouth, she seized it with avidity, respired rapidly,
Insensibility during Surgical Operations.

and soon seemed to relapse into the unconscious state. It was thus renewed four or five times before she was placed in bed. Her own statement is that she suffered no pain during the operation, that she was asleep, and when she awoke she breathed again of what was offered to her and fell asleep again—that she remembers to have done this three times. She says she did not know what we were doing to her, but in her sleep she thought she had got a reaping hook in her arm, and that she heard the noise of sawing wood. She says she was not sensible of any thing till she was laid in bed, when she became quite talkative, and evidently somewhat excited. She slept some hours during the night. On dressing the stump on the third day, she made a violent outcry at the slightest pain. I was convinced that her statements with regard to her freedom from pain during the operation, were to be believed.

II.—Nov. 21st. An intelligent tanner, about 30 years old, had, with a fracture of both bones in the middle of the left leg, his ankle crushed by the cars engaged in building the Salem and Methuen Railroad. I amputated the leg just below the knee. The patient inspired the vapor under Dr. Fisk's directions. He says he was not conscious of feeling any pain—and after the operation was finished and the ligatures applied, his consciousness returned, and, with great apparent sincerity, he asked if his limb was taken off. He says, though he felt no pain, he was conscious of the presence of those around him, and he was obedient to the directions given him. The operation was performed at about 3 P. M., and the stump was dressed at about 9, when, he says, the pain of a few sutures far exceeded that of the operation.

In both these cases the pulse became somewhat accelerated after the operation, the countenance assumed a vacant expression, although in the first case there was working of the brows, and the pupils were dilated. They both appear to be doing well, and exhibit no symptoms worthy of note.

Respectfully, yours,

Salem, Nov. 24th, 1846.

A. L. Peirson.

Postscript.—November 25th, 1846. Yesterday, I made further trial of the ethereal vapor, upon a middle-aged female, from whom I removed an adipose tumor, by an incision four inches long over the clavicle and scapula. She was an unimpressible subject, and was less perfectly under the influence of the vapor than the others, but she was entirely bewildered and not able to realize the nature of what we were doing to her. She was much more quiet than patients usually are, although the dissection was somewhat protracted, by the dipping down of the tumor into the supra spinal fossa of the clavicle, and confinement by fascia. She says she felt no pain, and did not evince any perception of the puncture of the needle in dressing the wound—a sensation which usually calls forth complaint, as it is commonly unexpected.

It needs, no doubt, still further careful observation of its effects, to
establish medical confidence in the new remedy. a confidence which must be of slow growth. From the results I have seen at the Massachusetts General Hospital, and in my own practice, I am led to expect the following advantages from its exhibition:

1st. Uniformity of its effects, unlike any mode of intoxication by stimulants in the stomach, or respiration of nitrous-oxide gas. My three patients were as unlike in age, temperament and habits, as could well be imagined, yet all exhibited the same appearance of passive endurance.

2d. There was no instinctive or voluntary resistance, which is so embarrassing to an operator. This, next to its power of preventing the perception of pain, is the greatest merit claimed for it.

3d. The securing the patent from the severity of the great shock which a capital operation inflicts on the sufferer. It was quite noticeable, in all the patients I have seen, that there was none of that extreme depression which sometimes follows a severely painful impression on the nervous system.

4th. Its effects pass off rapidly, and, as far as I know, no bad results follow.

5th. It can be repeated several times during the operation, except the mouth or jaws are the parts to be operated on. The repetition of the dose is always sought by the patients with avidity.

6th. The last and most important of its effects, is, that it either wholly annuls pain, or destroys the consciousness of it, so that it is not remembered; and thus the sentiment of fear is wholly obliterated. The patient appears to have been dreaming, and in the second case said that "he was in a distinct existence" (i.e., distinct from his former experience), thus illustrating the theory of double consciousness.

These are recommendations enough to ensure it a fair trial among the humane and enlightened members of our profession, and for their decision we must wait, and by it be governed in its future use. Dr. Morton and Dr. Jackson, at least, are entitled to the hearty thanks of the profession for their discovery, and the liberal manner in which they have offered it to all the subjects of surgical operations, both in and out of the Hospital. If some hunter up of absolute theories should prove that such a thing had before been thought of, or tried, still these gentlemen are entitled to the credit of having made it, for the first time, perfectly available to the suffering, and submitted it to the test of those competent to decide on its merits, without being content to rest its pretensions on non-professional credulity or popular notoriety.

Salem, Nov. 26th, 1846.

A. L. Peirson.

The Inhalation of an Ethereal Vapor to prevent sensibility to pain during Surgical Operations.

To the Editor of the Boston Medical and Surgical Journal:

Sir,—That which has always been a desideratum in surgery, seems, at length, to have been discovered. And if the effects of the
agent or agents be such as has been reported, of which there is little room to doubt since the appearance of the article in a late No. of your Journal, by Dr. Bigelow, Jr., every one who has any sympathy for human suffering must rejoice in the discovery; and all who are called upon professionally to perform painful operations must feel desirous to avail themselves of the means of diminishing or destroying that state of consciousness which recognizes all violence done to the sensitive tissues of the body, while such operations are in process.

But it appears, from numerous statements, and through your correspondent, Dr. B., who speaks with much authority on the subject, that the article used is a secret, or patented affair.

Now the enlightened and regular medical faculty of Massachusetts (as well as of other parts of our country), are associated and have arrayed themselves against all secret remedies, or patent medicines, and this for the just and laudable purpose of protecting the community, as far as might be, from imposition, and of preserving the integrity and standing of the profession; they cannot, therefore, feel themselves at liberty, as I judge, to seek aid for their patients through the adoption of such articles and means.

If I wish to furnish those by whom I am called upon to operate in painful cases with the relief which this new discovery may afford, I am told I must obtain it and use it as a secret, or purchase the patented article and employ it as such. But I ask why? It is said to be, by those who really do, or who assume to know what it is, the vapor of sulphuric ether only. This was judged to be the agent by several who witnessed some of its earliest public exhibitions under the hands of Mr. W. T. G. Morton. Dr. E. R. Smilie, of this city, with all due candor and liberality, has given, in your Journal for Oct. 28th, an account of his experience with sulphuric ether and opium, the effects of which he says are similar to those produced by the "new gas."

The free use of the article has been ceded to the surgeons of the Massachusetts General Hospital, and these gentlemen would receive it or adopt its use, on no other condition, of course, than that of knowing what it was, and having the full and free control of it for that institution. Hence, I ask, why, if I wish to avail myself of any of the possible effects of an article of our materia medica—an article which I have administered to patients hundreds of times, which I have often swallowed, and have inhaled till I was all but lost in sleep—why I must now purchase the right to use it, and use it as a patent medicine.

But we are still told that it is patented. What is patented? A power? A principle? A natural effect? The operation of a well-known medicinal agent? I doubt the validity of such letters patent. It would seem to me like patent sun-light or patent moon-shine.

To my mind it seems unfortunate, to say the least, that the discovery has not been brought to public notice in a different manner and under different circumstances. And I am sorry that Dr. Bige-
low, in his article above mentioned, has attempted to apologize for
the arrangements which he says have been made by Dr. C. T. Jackson
as one of the parties, to secure by patent the control of a medicinal
agent like the one in question. The doctor seems to feel very fully
his position in relation to this point, when he says,

"For various reasons, discoveries in high science have been usually
rewarded, indirectly by fame, honor, position, and occasionally, in
other countries, by funds appropriated for the purpose. Discoveries
in medical science, whose domain approaches so nearly that of
philanthropy, have been generally ranked with them; and many will
assent with reluctance to the propriety of restricting by letters patent
the use of an agent capable of mitigating human suffering."

Of the three reasons which he offers as worthy of consideration in
this behalf, two are, to my mind, entirely without force sufficient to
be any excuse for such a measure; and the total incorrectness of the
main part of the third, must be apparent to all who are at all acquaint-
ed with the subjects on which it is made to bear.

"1st. It is capable of abuse, and can readily be applied to nefari-
ous ends."

If, however, the right is to be sold, and every opportunity is to be
improved to make money of it, and all may buy who please, I do not
see how the abuses to which it may possibly be put by evil-minded
persons are to be restricted by a patent. And any one vile enough
to use such an agent for nefarious purposes, would not stop to ask
about his right to do so.

"2d. Its action is not yet thoroughly understood, and its use should
be restricted to responsible persons."

Who are the most responsible persons to be trusted with this
agent? All will assent, no doubt, that they are such as are most
likely to be acquainted with the properties of the article, with the
nature of those unpleasant symptoms which may occur from the use
of it, and have occurred in certain constitutions, and with such anti-
dotes or remedies as should be used if required; or, in three words,
regular physicians, surgeons and dentists. And I am at a loss to see
why the use of the discovery would not be as safe in such hands as in
those of "the proprietor" so called.

"3d. One of its greatest fields is the mechanical art of dentistry,
many of whose processes are by convention, secret, or protected by
patent rights."

Who is there that bestows a thought on the subject, who will not
see at once, that this narcotizing process of inhaling the ether has
nothing to do with the mechanical operations of dentistry, but only
with those which are strictly surgical, those which Dr. B., in speak-
ing of the importance of this process, couples with amputations.

As to that part of this third apology, which charges dentistry or its
professors with holding secrets, by convention, or by the security of
patent, I must view the writer as being entirely in error; for if there
is truth in the charge, I cannot find it. I do not know of anything
which is practised in dentistry, in our own country, even relating to
the mechanical department, which is kept secret by or from the duly
educated dentists. [How this is with the host of ignorant pretenders,
and advertising imposters, I know not.] And with regard to a
patent for any process in the art, or even for an instrument, I do not
know that such a thing exists, nor am I willing to believe, without
greater evidence than the doctor's assertion, that a patent can be
found that has any especial bearing on the subject of dentistry.

I have been asked, by a member of the Massachusetts Medical
Society—a respectable and excellent dentist of this city, what I in-
tended to do about using the "new gas," stating that he had used
it and knew what it was, and when questioned by me directly, did
not hesitate to say, "it is simply sulphuric ether"; but added, "the
discovery is patented." My reply to him was, "I shall not obtain
and use it as a secret medicine—I shall not purchase and use it as a
patent medicine. If it is simple sulphuric ether, and it will produce
the desired effect, I shall use it, and so will others who wish to do so."
If it is a compound, as still advertised to be by Mr. Morton, it is said
to be ceded to the surgeons of the Massachusetts General Hospital.
These gentlemen, it is to be presumed, will not consent to hold it as a
secret or patent medicine; and if known to the medical students who
are privileged to attend that institution for the purpose of acquiring
information and obtaining instruction in all that is done there pertain-
ing to their profession, no one, as I judge, can rightfully restrict them
from using what is there used for the relief of suffering humanity;
and it will become, as it ought to be, free to all who should be trusted
to do good with it, or who can receive relief from suffering by it. To
patent it would be, what it would have been for the immortal philan-
thropist Jenner to have patented vaccination.

These, Mr. Editor, are some of my thoughts on the subject; and if
I am in error for holding them, or for thus giving them to the public,
you are able, no doubt, and will be ready, to set me right.

J. P. Flagg.

No. 31 Winter street, Boston, Nov. 23d, 1846.

Observations on Croup: a paper read before the Fellows of the Col-
lege of Physicians and Surgeons. By Alexander H. Stevens,
M. D., President of the College.—(The Annalist.)

The frequent occurrence of croup, and its not unfrequent fatality in
the northern and maritime regions, especially those of the United
States, render important every addition to our knowledge of the na-
ture and treatment of this formidable disease. Up to the time of Dr.
Bayley, of New York, no modern writer appears to have entertained
correct pathological notions of this malady. It had previously been
confounded with anginose affections of the fauces. It was, however,
known to Hippocrates, who describes it in these remarkable words:—

"Ab angina homo suffocatur oculi affecti sunt, ac velut strangulatissiminent; facies et fauces incenduntur, imo etiam collum intumescitur vero nihil mali habere videtur."

We owe to the late Dr. Hosack of this city, the best description of the various stages of croup, and, probably, the best practical directions for the treatment of it. Yet there are important points, both of pathology and practice, which he leaves wholly untouched; and others in which, if I am not mistaken, he is inaccurate.

It is usual among the medical men of this city, to speak of genuine croup, meaning that in which a membrane is formed in the trachea and of spasmodic croup, many of them believing that inflammation either does not exist at all in the latter species, or that it is not the prior or primary morbid condition. These views I hold to be erroneous; and, if carried out in practice, highly dangerous.

Professor Ware, of Boston, (the most recent writer on croup,) has recently presented another view of the subject, in a well-reasoned paper, wherein he records numerous cases and dissections, knowing how little that is truly valuable to American physicians, in relation to croup, is to be found in European publications, more especially among the continental writers; or, rather, how far they fall short in establishing those rules of practice, by which alone the American physician can successfully contend with the formidable malady. I am led to infer that it may present itself under different aspects in different regions. Be this as it may, the division of croup proposed by Professor Ware into four species—viz., catarrhal, membranous, inflammatory and spasmodic, does not accord with my own experience, or with that of the most sagacious and experienced practitioners of this city, with whom I have conversed on this subject.

The forms under which croup has presented itself to my observation in this city, during a period of more than thirty years, are the following:—

1. A child with coryza and occasional cough of the ordinary character, as in bronchitis, is playing about without sore throat, or redness of the fauces, or glandular swelling. He appears more than usually animated—his countenance, especially his eye, is unusually bright, and his mind exhilarated. His skin, at this time, is not heated during the day, but rather harsh to the feel and dryer than natural. To an acute observer, with a nice ear, his voice will be a little sharper than usual; and if he cries for a time, the peculiar inspiration will excite alarm. On the second or third night the attack of croup commonly comes on, after a few hours sleep, the symptoms being a ringing cough, hoarse inspiration and great roughness of the voice. If the patient dies, a membranous formation is found in the trachea, and, more or less, in the bronchial tubes. This is what all admit to be genuine inflammatory croup.

2. Without any noticeable illness whatever, a child suddenly wakes up in the night with spasmodic suffocating cough, of the peculiar
croupy sound, the same inspiration as in the former case and the same hoarseness. A drink of some kind is given: the next cough is less sonorous, but the croupy symptoms as before described remain. The case is usually relieved by an emetic and some stimulating application to the throat, both of which are kept for that purpose in almost every well-regulated family in the city, where there are many children under eight years of age. If not so relieved, the patient may die within twenty-four hours or less, or after a lapse of two or three days, or even a week. Where the disease terminates quickly in death, no well-formed false membrane is seen, but only mucus in the trachea, more or less thick, and redness about the glottis. This is the form to which the term spasmodic croup has been given. Spasm of what? Of the glottis, undoubtedly! And from what cause? From the presence of vitiated secretions and undigested decomposed food in the stomach, it is answered. And how does this act? By sympathy? Now, this cannot be either proved, or even rendered probable. It is true, when the stomach empties itself by vomiting, the symptoms, for a time, at least, and often permanently, are relieved. But vomiting does more than unload the stomach: it relaxes the system, reduces the action of the heart, determines the fluids to the skin, which possess so remarkable an antagonism to the mucous surfaces: above all, it induces a copious secretion from the fauces, and thereby unloads the congested vessels of the glottis. It is admitted, that an acid state of the stomach often causes irritation in the pharynx, which thence extends to the posterior part of the upper portion of the larynx. In adults this is beyond all doubt, and in children it is every way probable. Is the impression of these acid matters, eructated from the stomach or secreted in the pharynx under particular circumstances, upon the larynx the cause of the sudden occurrence of croup? It would be difficult absolutely to disprove these propositions. In my mind they are not improbable; but, on the other hand, admitting the connection between disordered stomach and croup (established, as it is, by the most extended observation), may it not be attributable, in part, at least, to the fact that continued coldness of the surface is precisely the condition which fits the system, as well in childhood as in age, for the action of cold and moisture in producing inflammatory diseases?

But, setting aside these considerations, and, under any view of the subject, what is the morbid condition of the glottis, which gives rise to the croupy symptoms? If from cold, it is inflammation; if from acid secretions acting for more than a few minutes, it is, and can be, nothing else. There is, therefore, no spasmodic croup, if, by spasm, it is intended to exclude inflammation as a cause of that spasm.

But, I am asked again, how are the two kinds of croup above described, to be explained pathologically. The answer to this query will appear in the classification of the forms of croup now proposed.

Under the term croup, properly so called, are included two affections, which may exist either separately or together.
1. The cynanche trachealis, or trachitis, in which membranous exudation is more or less formed in the trachea, before any affection of the larynx, and, more especially of the glottis, takes place.

2. The cynanche laryngea, or laryngitis, or glottitis, in which the laryngeal, or spasmodic symptoms occur first or externally.

3. Between these two, there are varieties of combination, and these constitute the great majority of the cases met with in actual practice. In the most pure case of the so-called spasmodic croup, no practitioner can say beforehand that no fatal inflammation of the glottis will occur, or that no obstruction of the trachea, by false membrane, or solid mucus, is to be apprehended.

Is the disease, croup, a specific disease? Is there any peculiarity in the inflammation which gives rise to that secretion in the trachea? Let us look to anatomy and physiology, and the observation of disease, and to dissections, for answers to this question.

In the first place, between the most firm tubular form of false membrane and inspissated mucus, and mucus of an ordinary consistence, we see, in dissection of croup, every grade and variety. If specific, its character should be more marked.

When a child attempts to swallow hot water, the membranous exudation is produced in the posterior fauces and upper part of the larynx. Here, then, is an ordinary cause of inflammation producing what some consider a peculiar and specific secretion.

This question has a bearing upon practice, because it is contended by some that the specific effect of mercury is the proper remedy for this specific secretion.

It remains for those who deny the specific character of the tracheal secretion, to account for its existence there, rather than in the larynx and trachea. In the larynx it is more rarely met with; in the trachea it gradually becomes less tenacious, and more resembles ordinary or inspissated mucus. May it not be merely inspissated mucus in all cases? Mucus, inspissated by rapid desiccation? If a portion of mucus is left in the trachea, the increased rapidity of respiration, and the narrowed calibre of the tube, must necessarily remove its watery particles in a doubly augmented ratio; less so in the trachea, because the same volume of air in proportion to surface does not pass by, and the air, also, is more charged with the moisture, in its previous passage through the trachea—less so in the larynx, because that tube is larger. Rarely is the membrane seen upon the glottis, because death arises from spasms, ere it has time to form on that irritable part. Rarely in adults, because in them the trachea is double the size it is even in advanced childhood. and because they exert a stronger volition to detach by hawking the first tenacious mucus that is adherent to the trachea.

The surface of the trachea is very unirritable. Where foreign bodies enter by accident, as when a tube is forced into it from an artificial opening, no coughing is induced, unless, by its rising up, the glottis is touched. A small foreign body has been known to remain
for years quietly lodged in one of the ventricles of the larynx. The trachea, and the comparatively unr irritable parts, are those in which inflammation may be going on for a considerable length of time, without exciting any very marked symptoms. This constitutes the true explanation of the two modes of invasion in croup.

Besides these three forms of idiopathic, primary, or true croup—the laryngeal, the tracheal and the mixed—there are forms of secondary croup, such as occur in measles, scarlet fever, and, more especially, in the malignant ulcerated sore throat, the diphtherite of Bretonneau. This last occasionally occurs sporadically with us, and is, I apprehend, very generally, the disease, which, under the term croup, carries off, in quick succession, two or more children in the same family. I have treated it successfully with calomel and opium, followed by wine whey, in conjunction with nitrate of silver, to the throat—but my experience is too limited, for me to assume to instruct others in regard to its nature and treatment. The French writers do not appear to discriminate between this affection and croup, as known here and in Great Britain.

Before speaking of the proper medical treatment, I will say a few words on a point of Hygeine.

1st. What is the best method of bringing up children, with a view to their exemption from this disease?

Two systems are adopted for this purpose—one is to allow free exposure and exercise in the open air, except in the very worst weather. The children, being well guarded with warm clothing, are not suffered to cease their exercise until they re-enter the house. The second is to confine them within doors, during the whole of the winter and the early part of the spring. My observation leads me to think that, although the first plan, if it is followed with great care, is the best, yet the second is more easily pursued, and, upon the whole, is the safest.

2d. Under what circumstances should especial precautions be taken, with a view to ward off the attack?

A child, between the ages of two and five years, with catarrh and cough, however slight and unfrequent, is a fit subject for croup: and, if that disease is prevailing at the time, an attack, after any exposure to cold and moisture, or any excess in eating, is almost probable. The child should be confined to the house and dieted.

The treatment of croup should be prompt and decided; for, left to itself, the disease would probably, in general, prove fatal. But, although prompt and decided treatment is necessary, it does not follow that the heroic treatment is always, or even generally, required. But the existing symptoms must always be met by remedies adequate to subdue them. The great skill of an experienced practitioner is shown in determining what amount of active treatment is essential in any given case; how much is requisite to remove the threatening symptoms, and to induce a favorable change, and how soon he must recur to the more severe remedies, after the disease has been for a time meliorated.
Cancer of the Stomach. By Professor W. H. H. Walshe, M. D. (British and Foreign Medical Review.)

The mortality from cancer of the stomach is very considerable. In this respect it yields to no organ but the uterus. Of the 8289 deaths in Paris, 2303 are referred to the stomach. In 67 cases, MM. Herrick and Popp found this organ diseased in 19. Cancer of the stomach may exist alone, but is usually associated with similar affections of other organs, more especially of the liver. It is almost invariably primary. All the varieties of the three species of carcinoma occur in this organ; it is the special site of colloidal cancer; and the milt-like variety of encephaloid is more common here than elsewhere. Infiltration is essentially the mode of deposition in this place, and, indeed, throughout the alimentary canal; and the seat of the deposit is the submucous cellular tissue, though the mucous membrane, particularly when hypertrophied, may become a nidus of formation. The pylorus is the part most commonly affected; next the cardiac orifice; then the greater, and, lastly, the lesser curvature. Dr. Walshe has not met with an instance in which the disease was limited to the fundus—a fact of importance as bearing upon the supposed origin of the disease from the ingestion of irritants. Three-fourths, or even more, of the organ may be disorganized; and this is particularly the case when colloid is the species.

The mucous membrane long resists the disease, and its chief tendency is to become irregularly hypertrophous, giving rise to the apparent formations of vegetations, &c. The cellular structure undergoes very marked thickening, and this occurring between the muscular fibres produces the striated appearance so commonly observed. The muscular coat of the sound parts of the organ is often enormously hypertrophied. The peritoneal coat is seldom affected, excepting in cases of colloid.

The size of the organ varies extremely. When the pylorus is affected it is often greatly enlarged; when the cardiac orifice, it is contracted; when the body of the organ is alone diseased, the general bulk commonly remains unchanged. It is a curious and unexplained fact, that, where the pyloric orifice undergoes dilatation, the walls of the stomach become hypertrophous.

The progress of the disease presents nothing peculiar. Ulceration is slow to commence; but when once begun, its ravages are extensive. In most cases, adhesions, especially to the liver and pancreas, take place before the peritoneum gives way.

The disease is more common in males than in females, and between the ages of 35 and 60. It is often hereditary, and has apparently, in many cases, been induced by mental distress.

Cancer of the stomach, in the early stages especially, may be confounded with other affections; the most practically important of which are gastrodynia and chronic gastritis. We subjoin the following sketch of the chief points of distinction:
Cancer of the Stomach.

Gastrodynia.

Tongue variable, but often pale, and pitted at the edges.

Eructation frequent of air, without disagreeable smell.

Appetite depraved, irregular, capricious.

Sensations, sometimes of heat, sometimes of cold in stomach; thirst not common.

Solids more easily digested than liquids.

Digestion completed, though with much labour and suffering.

Pain variable, occurs in irregular paroxysms; is often relieved by ingestion of food or pressure.

Epigastric pulsation not uncommon.

Never runs a completely latent course.

Chronic vomiting is most frequent in females, and is almost confined to persons affected with hysteria.

Vomiting of coffee-ground-looking matter does not occur, unless from accidental and rare haematomesis.

Bowels generally constipated, but not obstinately so.

Fever of accidental and rare.

In females the chlorotic tint is often present.

Often accompanied with various nervous or hysterical symptoms.

Hypochondria occasionally present.

Is more frequent than the other two.

Is more common in women than men.

May exist in very young persons (e. g. in 15.)

Chronic Gastritis.

Tongue dry, red, contracted, smooth, shining, or saburral.

Eructation not a prominent symptom.

Sensation of heat in stomach; thirst.

Digestion imperfectly completed.

Epigastric pain not very severe, and scarcely ever felt when the stomach is empty; increased by pressure.

It is not observed.

Never completely latent.

Vomiting of sudden and severe character sometimes the very first symptom; occurs irregularly before or after eating.

Coffee-ground-looking matter sometimes vomited; but this is rare and exceptional.

Irritation, colic, and diarrhoea frequent, from extension of inflammation to intestine.

Evening fever not uncommon.

Violet discoloration of the lips, conjunctivae, face, &c., often present.

Not so attended.

Hypochondria not caused by chronic gastritis.

Is rarer even than cancer.

Is probably equally frequent in both sexes.

Occurs at all ages.

Gastric Cancer (early period.)

Tongue pale or natural.

Eructation of air more or less fetid, sometimes horribly so, a prominent symptom.

Appetite diminished, or even totally suppressed.

These symptoms not observed.

Liquids more easily digested than solids.

Digestion not properly effected.

May for a variable time be completely latent.

Vomiting of sudden and severe character is never the first symptom; it occurs generally early in the morning, subsequently at variable periods after eating, or at periodical intervals.

The matters vomited are a first glairy, then half-digested food, then coffee-ground or soot-like.

Bowels habitually and obstinately constipated; occasional severe diarrhoea.

Fever absent.

Straw-coloured tinge of skin may be obvious.

Not so attended.

Hypochondria not an effect of gastric cancer. (7) Is much rarer than gastrodynia.

Occurs more frequently in men than women.

Is excessively rare before age 30.
Gastrodynia.
Is often hereditary.
Is rarely referrible to any distinct local exciting cause.
Is relieved or cured by stimulant, tonic, and anodyne treatment.

Chronic Gastritis.
Is not hereditary.
Is often referrible to some distinct local exciting cause.
Is relieved or cured by antiphlogistic treatment.

Gastric Cancer (early period.)
Occasionally runs in families.
Is rarely, if ever, referrible to local agencies.
Is not cured, but is relieved by special treatment.

As the disease advances the diagnosis becomes less obscure, but cases do now and then occur which present all the ordinary combinations of symptoms, and yet are not cancerous; so that the detection of tumour is the only absolutely certain sign. This is most easily discovered when seated in the pylorus or great curvature: it is much more difficult to detect when occupying the lesser curvature or the cardiac orifice. It must be remembered that the situation of the tumour changes continually; and it is of the last importance to bear in mind that the whole course of the disease may be of an intermittent character.

In regard to treatment but little can be said. Conium is the only supposed specific which is applicable. Dr. Walshe has derived benefit from a combination of trinitrate of bismuth and extracts of hop, stramonium, and conium, in pill; and he believes that the treatment generally should be such as is applied to nervous, rather than inflammatory affections. Leeches and blisters may be used to relieve occasional local irritation. Opium is contraindicated by the constipation; but the Indian hemp may be tried. A drop or two of oil of cajeput on sugar is the safest carminative. Cold applications or a blister sometimes also relieve the flatulence, and a dose of morphia has been found useful in the same way. But most is to be done by regulating the diet, observing what agrees with the patient, making the quantity taken at each meal small, securing perfect regularity in the hours, and complete mastication of each morsel. Sickness may be relieved by effervescing draughts, prussic acid, blisters, rough ice allowed to melt in the mouth, the application of ice in bladders to the epigastrium, or an occasional dose of creosote. The bowels are best kept open by enemata: drastic purges are quite inadmissible.

M. Recamier narrates a case of pyloric tumour, "possibly cancerous," which was reduced in bulk by pressure, applied by means of a folded napkin secured by a bandage round the body. It may be well to try some such plan as this.

On the Treatment of Orchitis by division of the fibrous tunic of the Testicle.—[Gazette des Hopitaux, from St. Louis Medical and Surgical Journal.]

M. Vidal de Cassis is a partisan of division of the fibrous tunic of the testis in some forms of orchitis, attended with severe suffering.
The following is a résumé of M. Vidal's opinions, for which we are indebted to his interne, M. Bouteillier.

Definitions and Complications.—Parenchymatous orchitis, which may likewise be designated as orchitis properly so called, is inflammation of the testis itself. It exists, according to M. Micard, scarcely ever without affection of the epididymis. This last inflammation precedes orchitis properly so called. In fact, in order to extend itself to the testis, the inflammation must affect the epididymis. Let it be well understood, that we are speaking of affections of the testis consequent on gonorrhœa. In cases following blows on the organ, or of wounds of its structure, the reverse may happen—that is to say, we may meet with parenchymatous orchitis before we have epididymitis. We can easily conceive the existence of the first inflammation in such cases as these, without the coincidence of the second.

Parenchymatous orchitis often accompanies effusion into the tunica vaginalis, the consequence of inflammation; but in all these cases we are not to conclude there is inflammation of the serous membrane; we believe the inflammation has more frequently a passive rather than an active character.

Lastly, sometimes we may find in the same person, parenchymatous orchitis, epididymitis, effusion into the tunica vaginalis, inflammation of the subcutaneous cellular tissue, or even of the skin of the scrotum.

Frequency.—Orchitis, properly so called, is much more frequent than is generally believed, and merits a description in our nosographical chart. If M. Vidal has observed more than any other surgeon, one ought not to be so much surprised when acquainted with the large number of patients who apply for admission at the Hopital du Midi. Each surgeon can there make his selection. While one receives a large number of patients affected with diseases of the scrotum, in order to confirm his views on those affections, another admits cases which bear most on syphilis. So that it cannot be said that parenchymatous orchitis is only met with in the wards of M. Vidal. One case presented itself in the service of M. Ricord, in the commencement of this year.

Causes.—Parenchymatous orchitis, like epididymitis, recognizes as its cause, most frequently, an existing gonorrhœa, or one that has recently disappeared; in fact, it is most frequently gonorrhœal. We have attempted to push our inquiries further, and ascertain why, in certain individuals, gonorrhœa induces the affection of the epididymis, and in others (but much less frequently), orchitis, properly so called. To this end we have most minutely interrogated our patients on the circumstances of the gonorrhœal affection. But we have been unable to find any aggravating cause constant in all.

Local Symptoms.—The tumor formed by the inflamed testis is less voluminous than when caused by the epididymis. We have already stated that Dupuytren was wrong, when he advanced an opposite opinion. In the general swelling, the enlarged epididymis forms the larger portion, next the testis—and, lastly, the effusion into the tunica
vaginalis. The form of the partial tumor we are speaking of, is that of the testis, exaggerated, it is true. The inflamed organ presents a swelling in front of the epididymis, behind the serous effusion; neither elasticity nor resistance remains; the swelling is as if containing coagulated fluid. When the tunica vaginalis is emptied, the testis appears to occupy the place of the liquid; and the general swelling, previously pear-shaped, assumes a rounder form. The pain and local heat are of the most violent description. The pain has this peculiarity, that it spreads upwards and downwards, extending to the kidneys, and to a corresponding point below. The color of the skin is slightly modified; but in some cases it is exceedingly red, or even of a violet color. It has been remarked, that the cord is less liable to be affected in cases of parenchymatous orchitis, than in instances of simple epididymitis.

General Symptoms.—Fever is generally of the most violent form; there is sleeplessness, nausea, colic; and vomiting comes on, adding considerably to the suffering of the patient, so as to induce him to call for treatment which silences him at once.

Prognosis.—The prognosis is not severe, when we destroy that which gives it a particular character—namely, the strangulation; but is very severe, on the contrary, when the disease is allowed to run its own course. In that case, suppuration or mortification speedily comes on in the parenchymatous structure of the testis.

Treatment.—Local and general bleeding, poultices made with laudanum, narcotic embrocations, purgatives—lastly, puncture of the tunica vaginalis, produce but slight amelioration of the symptoms of the patient. It is necessary, in many cases, after having recourse to all these remedies, to have recourse to the division of the tunica albuginea, and it is better to perform it early.

This little operation presents nothing very alarming to the patient; hitherto, it has never been followed by an untoward event. Nevertheless, before resorting to it, it may be as well to puncture the tunica vaginalis, when that membrane contains fluid, and, if that allays pain, allow the patient to remain quiet; but we are obliged to admit that temporising in such cases has too much danger to be long excusable. We have always remarked that pain, after the division, ceases immediately; the fever decreases, and the patient falls asleep in a quarter of an hour, although he may have been unable to rest for several days.

After the division of the membrane, no further application is necessary other than a laudanum poultice applied to the scrotum, which should be kept in its place by means of a loose bandage. In the seven cases of division, which we have collected, the cure was rapid; in the instance of the patient operated on by M. Cullerier, the recovery took place in eighteen days; in a case we have seen this year, a cure was effected in ten days, in one instance—in sixteen, in another.

The division of the tunica albuginea should not be more than a centimetre or a centimetre and a half; cicatrization sometimes takes place by union of the skin, tunica vaginalis, and albuginea, to this
extent; but very often this adherent point—which is in no respect injurious—completely disappears, and the testis recovers its freedom, its ordinary volume, and normal consistence; its functions are subsequently in no respect altered.

Hydropathy, or the Cold Water Cure.

The following conclusions on this subject, we meet with in Forbes' British and Foreign Review:

1. We should be glad to see Dr. Currie's practice revived (for the sake of experiment, at least) in all its boldness, for the suppression of the general febrile paroxysm. On carefully looking over the evidence published by Dr. Currie and his cotemporaries, it is impossible to deny that they attained a larger amount of success in treating fever by water than other practitioners have done by other means. We have already pointed out how their practice can be misunderstood by modern writers. But, while we regard this practice as well adapted for treating general fever, we find no proof that it is competent to meet the dangerous local complications with which fever is so often accompanied. These complications may reasonably be expected less frequently, when the early treatment of fever is rendered more efficacious. But when they do occur, we find nothing in hydropathic writers to show that lancets, leeches, blisters, &c., can be dispensed with.

2. In a large proportion of cases of gout and rheumatism the water cure seems to be extremely efficacious. After the evidence in its favour accessible to every body, we think medical men can hardly be justified in omitting—in a certain proportion of cases, at least—a full trial of it. No evidence exists of any special risk from the water practice in such cases.

3. In that very large class of cases of complex disease, usually known under the name of chronic dyspepsia, in which other modes of treatment have failed or been only partially successful, the practice of Preissnitz is well deserving of trial.

4. In many chronic nervous affections and general debility we should anticipate great benefit from this system.

5. In chronic diarrhoea, dysentery and hemorrhoids, the sitz-bath appears to be frequently an effectual remedy.

6. We find nothing to forbid a cautious use of drugs in combination with hydropathic measures. On the contrary, we are convinced that a judicious combination of the two is the best means of obtaining the full benefit of each. The water cure contains no substitute for the lancet, active purging, and many other means necessary for the relief of sudden and dangerous local maladies. The banishment of drugs from his practice was necessary, and perhaps natural, on the
part of Preissnitz: the like proceeding on the part of qualified medical men superintending water-establishments in this country, evinces ignorance or charlatanry, or both.

7. With careful and discreet management, in the hands of a properly qualified medical practitioner, the water-cure is very rarely attended with danger.

8. Many of the principal advantages of hydropathy may be obtained in a private residence, with the assistance of ordinary moveable baths. Therefore, it can easily be brought under the direction of the regular medical practitioner.

9. In many cases, however, it is evident that what may be termed the mere accessories of the water-cure, are of extreme importance in bringing about a favorable result; and these accessories are frequently not available—or available in a very inferior degree—in ordinary practice. Among the more important of these accessories we may mention the following as having relation to most of the chronic cases treated in hydropathic establishments: 1, relief from mental labours of an exhausting or irritating kind, from the anxieties and responsibilities of business, from domestic irritations of various kinds, from mental inaction or ennui, &c.; 2, change of locality, air, scene, society, diet, &c.; 3, the fresh mental stimulus involved in the almost constant occupation of the patient's time, in the performance of the numerous and various dabblings, paddlings, sweatings, washings, drinkings, rubbings, &c., imposed by the water treatment; 4, the frequent and regular bodily exercise taken in the open air, or within doors; 5, the powerful mental stimulus supplied by the confidence generally reposed by the patients in the means employed, and by the consequent hope, alacrity, cheerfulness, &c.; 6, the total abandonment of vinous and other stimulants, and of drugs,—all of which have, in a large proportion of cases, been tried and found, not only useless, but probably, productive of disadvantage.

10. A certain and not inconsiderable portion of the benefits derived from hydropathic establishments are, however, attainable without them, by other means, as by travelling, &c., &c. For example, we suspect that many of the most striking results witnessed in such establishments, as in the case of Sir Edward Bulwer Lytton or Mr. Lane, would have probably been obtained, if the patients had chosen to hire themselves, and had worked as agricultural labourers, in a dry, healthy district, and had lived on agricultural fare, sufficiently nutritious in quantity and kind, for a sufficient length of time.

11. Notwithstanding the success of the founder of hydropathy, its practice by non-professional persons can neither be fully advantageous nor safe. At the same time, it is true that very little experience is necessary to enable an educated medical man to acquire sufficient insight into it for purposes of practice. Many of the best hydropathic physicians have, in the first instance, devoted very few weeks to studying the subject in Germany.

12. Many advantages would result from the subject being taken
up by the medical profession. The evils and dangers of quackery would at once be removed from it. Its real merits would soon be known. The tonic portion of its measures might then be employed in conjunction with special remedies of more activity, which, no doubt, would often prove exceedingly beneficial.

13. The benefits ascribed to hydropathy, but arising indirectly from the abandonment of drugs, vinous and other stimulants, &c., may certainly be obtained without sending patients to Graeffenberg.

14. Finally, it must always be remembered that the distinction between quacks and respectable practitioners is one, not so much of remedies used, as of skill and honesty in using them. Therefore, let our orthodox brethren be especially anxious to establish and to widen, as far as possible, this distinction between themselves and all spurious pretenders. "Artém medicam denique videmus, si à naturali philosophia destituatur, empiricorum praxi haud multum prestare. Medicina in philosophia non fundata, res infirma est."

On the Topical Application of the Sulphate of Quinine.
(New Orleans Med. and Surg. Journal.)

The following correspondence having been submitted to us, we have thought it might be interesting to our readers, and therefore insert it in this place:

To A. J. Wedderburn, M. D., New-Orleans.

DEAR SIR—Having observed, with much interest, some remarks by you in the last number of the New Orleans Medical and Surgical Journal, on the subject of the treatment of ulcers, with quinine, I take the liberty of suggesting to you, that during the last five years I have frequently treated chronic conjunctivitis and urethritis, by direct applications of quinine dissolved in distilled water—in the latter cases, believing that the inflammation usually extended to the bladder, I have directed the injection to be thrown into it.

I would beg leave to remark also, that for ten or twelve years I have treated chronic ulcers, especially those resulting from burns, with a preparation of quinine, prep. chalk and pulv. rhei, with very marked benefit.

I am, most respectfully, your obedient servant,

Richard Lee Fearn, M. D.

Mobile, Sept. 5th, 1846.

New Orleans, Sept. 10th, 1846.

DEAR SIR:—In answer to your letter, dated the 5th instant, I have to inform you that I have never used the sulph. quinine, in the treatment of conjunctivitis, or in urethritis, as a local application, but I have frequently noticed from its internal administration the relief afforded, in the course of a few hours, in a case under treatment for
a soft cataract, the person being subject to frequent violent attacks of inflammation of the conjunctiva. In these attacks, I have always used opium with the quinine, when the latter has been given, and I have, at times, used the opium alone, but never with the same effect as when given in combination. I have administered this remedy in cases of urethritis, for chordee, in ten gr. doses at bed time, with marked success, when the same quantity of camphor has failed to give relief.

I cannot doubt, for a moment, the good results that must attend the topical application of quinine in the affections mentioned above. I have often thought of its application in such cases, but have not resorted to the treatment, in consequence of the relief I have always seen follow the use of the nitrate of silver in inflammations of the conjunctiva. If you will refer to the January number of the New Orleans Journal, you will find a case reported of a sloughing ulcer from primary syphilis, in which the ulcerative process was immediately arrested by the topical application of quinine, when other remedies had failed.

Erysipelas prevails in the Charity Hospital, during the winter, in the form of an epidemic. During the last winter, after a number of cases in which I had used the knife, were attacked with this disease, I was induced to resort to dressings saturated with a solution of quinine, about 5 grs. to the ounce of water, immediately after an operation, and in no case in which this remedy was used, did the disease occur.

I have lately used an ointment of quinine in a case of Eczema Capitis. The excessive inflammation attending the eruption was relieved in a few hours, and the disease entirely subsided in four or five days. The ointment used in this case was composed of sulph. quinine g3/4; laudanum gtt. xv; ol. lavender gtt. iij; simple cerate g3/4. The laudanum was used chiefly with the view of dissolving the quinine.

I shall take the earliest occasion to follow your treatment, and inform you concerning the same.

I am, very respectfully, your obedient servant,

A. J. WEDDERBURN.

To Richard Lee Fearn, M. D., Mobile, Ala.

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Case of Inverted Displacement of the Urinary Bladder. By J. G. Crosse, Esq.—(British and Foreign Review.)

Mr. Crosse's paper gives the history of a case of rare occurrence, and is important, as exhibiting the value of a careful examination and consequent just diagnosis, and the dreadful risk attending a mistake in this particular. We extract the more material points of the narrative:

"In the year 1829, a highly respected colleague of mine, since
deceased, received under his care a healthy-looking female child, aged between two and three years, on account of a tumour, about the size and shape of a walnut, projecting visibly at the external labia pudenda. It was of a florid red colour, and somewhat granulated upon its surface, so as to resemble a large strawberry; and the surgeon entertained a notion that it was a vascular tumour, which might be removed by ligature, on which account he requested me to inspect it.

"After a slight examination, I expressed my doubts as to its being a vascular tumour, and dissuaded him from the hasty application of a ligature. I could not, however, immediately explain its nature, having no conception how such a tumour could be formed by the displacement of parts only, without any superadded morbid growth. Towards the posterior part of the tumour, and on its sacral aspect, there was an aperture, which was conjectured to be the entrance into the displaced urethra. A very small female catheter easily entered this aperture, and passed along a channel a little to the left side of the median line: urine distilled in drops through the catheter but there was not a gush, although the instrument had entered so far that we concluded it must have reached the cavity of the bladder. Besides what thus oozed through the catheter, slightly tinged with blood, there was an oozing of urine from another source, which was not explained until a second and more strict examination, instituted a few days afterwards, on my casually coming to the patient's bedside, just as the surgeon was preparing to apply a ligature round the neck of the tumour.

"I now found concealed in a fold of the tumour, and near to the posterior junction of the labia, two orifices not far asunder from which the urine oozed, and which were evidently the vesical terminations of the ureters. On pressing the tumour firmly, as if to reduce it like a hernia, I found it yield and pass gradually behind the symphysis pubis, and within the labia; and under a continuance of the taxis it all retired, leaving the external parts in their proper shape and position. A passage remained, through which the tumour on retiring had taken its course, which was actually the dilated urethra, into which I could and did introduce my little finger, until it fairly entered the cavity of the replaced bladder; for it now became clearly demonstrated that the vascular red tumour, externally presenting itself as first described, was the urinary bladder in its entire thickness, including its mucous, muscular, and peritoneal coats, prolapsed through the dilated urethra, and at the same time inverted or turned inside out. The proper lining membrane of the bladder became, in the progress of this displacement, the external covering of the tumour. As fast as the urine was secreted by the kidneys, it oozed from the terminating orifices of the ureters, which were concealed within a fold of the exposed surface of the tumour, and approximated to each other. The neck, or deepest and narrowest part of the tumour, just concealed within the labia, was covered by the inverted lining of the urethra, the inversion being complete.
“In this instance, had a ligature been efficiently applied to the neck of the tumour, as was contemplated, the bladder would have been removed, including all its coverings, the ureters cut through just above their terminating orifices, and the peritoneal cavity largely opened, with a necessarily fatal result.

“As the friends of the child could not be applied to, the history was imperfect. It was stated that the tumour had existed for a considerable time, and been always attended by stillicidium urinae; also that it had been once replaced, but descended again, shortly before it came under my observation. During the short period that the child remained under my notice, after the replacement of the bladder, there was no relapse; and since this account was sent to press, I have been fortunate enough to ascertain, and to be enabled to add, that the patient is still living, after an interval of sixteen years, and is a healthy young woman, save only the affliction of the incontinence of urine, with which she has been constantly troubled, but without any relapse of the vesical displacement.”

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**On the Effects of Emetics on Young Subjects.** By John B. Beck, M.D.—(New York Journal of Medicine.)

Dr. Beck remarks that children vomit with greater facility than adults; this he ascribes to the more conical shape of the stomach in children, in consequence of which the contents are more readily forced out. Active and debilitating emetics, the author adds, are often injurious; he alludes especially to the antimonial emetics. In the first place, tartar emetic is a powerful sedative, and children do not bear well this class of agents. The following are the author’s conclusions:

1. As a general rule we need not be afraid of vomiting the youngest child, provided the means used are mild—such as ipecacuanha, &c. The mere act of vomiting is attended with no danger, while the remedial agency of an emetic is one of great power and value. Besides acting on the stomach, it extends its influence to the mucous membrane lining the pulmonary organs, promoting secretion in the first place, and then aiding in dislodging and ejecting morbid accumulations; accordingly, in pulmonary affections, there is nothing so efficacious.

2. The vomiting induced by the preparations of antimony ought to be resorted to with great caution in very young children, and should never be used except in those cases where a sedative effect is required, and can be borne with safety. Inflammatory excitement ought then always to be present to justify its use in a young child. Where the object is simply to evacuate the stomach, it ought never to be thought of. In such cases as croup and pneumonic inflammation, it may be justifiably and beneficially used. In these cases it will be found, that
the system can bear the sedative influence of the article much better than it can in the ordinary conditions of the system. Even here, however, care should be taken not to push the article too far, as dangerous collapse has been known sometimes to be the result.

3. The continued use of Tartar Emetic in young subjects cannot be too specially guarded against. It is in this way, probably, that it is so apt to prove injurious. A single dose, even though it vomiting very freely, may be borne with comparative impunity, while the repetition of it may keep up nausea and intestinal irritation, so as to cause injurious prostration. This is very likely to happen in cases of a chronic character, like hooping-cough. Although mild emetics are among our best remedies in this disease, and where the subject is old enough, a single emetic of antimonial is frequently exceedingly beneficial, yet the repeated use of antimonial emetics, as is too often the case, appears to me to be a great error in practice. It is not indicated by the nature of the symptoms, and violates a great rule which ought always to be observed in the management of chronic cases, and that is not to break down unnecessarily the strength of the patient. Again, in ordinary catarrhal affections in children, a good deal of mischief is frequently done by the continued use of expectorant mixtures containing this active article. The Hive Syrup of Dr. Coxe, which is now in every family, and is given on the slightest occasions to infants, without even consulting a physician, has, I am convinced, done a great deal of harm. I say this without wishing to undervalue this preparation. In proper cases it is really a useful article, but persons out of the profession ought to know that its principal efficacy is owing to the quantity of Tartar Emetic which it contains, and that the indiscriminate use of it in cases where mild articles are required, must be injurious.

4. As the effect of Tartar Emetic on the system cannot always be measured by its emetic operation, even in the adult, this fact ought to serve as a caution against the too common practice of giving repeated doses of it to produce vomiting in children, when they happen to be narcotized. While it fails to vomit, it may still operate as a poison to the system. In all cases of this kind, the proper method of treatment is, not to push the emetic, but to endeavor to restore the sensibility of the patient, and then sometimes vomiting comes on at once.

5. In using Tartar Emetic in children, especial regard should be

* Dr. Armstrong says that "it is a most notorious fact, that the hooping-cough is far more fatal in London than in the country; and I believe," he adds, "that this arises from the very free use of antimonial wine in London." Lectures, p. 248.

† Every ounce of Coxe's Hive Syrup contains one grain of Tartar Emetic. My friend Dr. McCready has communicated to me the particulars of a case in which a child between four and five years of age, laboring under hooping-cough, manifestly sunk under the too frequent use of this article. The exhibition of it had been continued about eight days, when symptoms of intestinal irritation came on, accompanied with great general prostration, which in a few days ended the child's existence.
had to their constitutions. In those naturally delicate, and especially where the scrofulous diathesis exists, it should never be used if it can be avoided. Prostration is much more apt to ensue in them, and where the article is persisted in for any length of time, it is sure to do harm. It is in such constitutions, when laboring under hooping-cough, and where the use of this article has been too long continued, that the baneful effects of it are most strikingly observed.

6. It is perhaps hardly necessary to say that if Tartar Emetic be an article of such danger, the younger the subject to whom it is given, the more likely is it to do harm. In children under a year, I should say, as a general rule, it ought never to be used. During that period the powers of life are too feeble to bear so active a remedy, at the same time that all the beneficial effects of an emetic may be gained from the use of ipecacuanha, or even milder means.

BIBLIOGRAPHICAL NOTICES.


This interesting and attractive volume is designed to illustrate by easy and familiar experiments, and in popular language, many of the phenomena going on in the realm of nature through the ever-varying year, and to exemplify and explain many beautiful scriptural allusions involving the play of chemical and philosophical laws. Nor has the gifted author failed in accomplishing his laudable purpose. His agreeable style,—the correctness of his philosophical views, and especially the high moral and religious bearing of his work, cannot but secure for him the commendation and patronage of the intelligent and virtuous.

2. Draper’s Chemistry.—We have just received, through the courtesy of the enterprising publishers, Messrs. Harper and Brothers, a copy of “A Text Book on Chemistry, for the use of schools and colleges, by John William Draper, M. D., Professor of Chemistry in the University of New York, Member of the American Philosophical Society, &c.” It is comprised in an octavo volume of 408 pages, and is what it purports to be—“a compendious book which sets forth in plain language the great features of the science.” With the exception of some change in the order of arrangement, the general plan resembles that of Fownes’ Introductory Treatise, published during the past
year, and of Graham's larger work—a method having decided advantages, as we suppose, over the one adopted by Turner, Kane, &c., where the salts are all reviewed separately and apart from these bases and bi-elementary compounds. Without attempting to examine the importance of every hypothesis maintained by the author, it is enough to remark that Dr. Draper's familiarity with that department of physics upon which he treats, has enabled him to condense and bring up the subject to the present day, and to furnish a correct synopsis of the leading facts and principles in Chemistry, while his established reputation is a sufficient guarantee for the scientific character of the work.

3. Adulterations of various substances used in Medicine and the Arts, with the means of detecting them, intended as a Manual for the Physician, the Apothecary and the Citizen. By Lewis C. Beck, M. D., Prof. of Chemistry in Rutgers College, &c. New York: Samuel S. and William Wood—1846; 333 p. 12mo.

The design of the work is fully set forth in the title, and we doubt not it will prove highly useful, for much injury results from the employment of adulterated articles. The processes proposed for the detection of adulterations are generally quite simple and may be managed by any one, as they are in most instances free from technicalities. The work appears to have been carefully prepared, and the typography is excellent.


This little work we are persuaded will be found a very convenient reference by many of the junior members of the profession, and to others who may be troubled with a defective memory. It is too often the case that the attention of the young physician is almost exclusively confined to the study of the nature and diagnosis of disease. He gives but a slight consideration to the means which may modify or control morbid action, and as a consequence the range of his resources is quite confined. Many physicians for the want of such knowledge suffer in their reputation. Whilst this work will not supply a lack of knowledge of the action and doses of medicines, it may often serve as valuable purposes at the bed-side of the sick.
PART III.—MONTHLY PERISCOPE.

Digestion in 1846.—At last the phenomena of digestion are enlightened: digestion is no more to be considered a simple but a complex function. There are as many digestions as organs. First, the stomach, by which animal food is dissolved; it is in carnivorous animals almost the only intestine and they require no other; their digestion is gastric; it is intestinal in herbivorous tribes. After the incisors and cuspids come the molares: in the same manner after the carnivorous intestine we find the intestines which digest grains and vegetables masticated by the molares. In the small intestines, feculent substances are absorbed and saccharified—a fact proved by a simple experiment; secula taken in the stomach immediately above the pylorus will become blue when placed in contact with iodine, and will, on the contrary, not change color after its passage through the pyloric orifice. It is this, the principal phenomenon of digestion in the duodenum, which has led to the discovery of the saccharifying power of the pancreatic secretion. Hence not only a change in the theory of digestion, but in the pathology of diabetes; we can no longer admit that the kidneys secrete sugar, but that they allow the passage of the saccharine matter contained in the blood.

All these discoveries are in themselves important scientific acquisitions; but their importance is doubled when their practical consequences are reflected upon. The whole history of gastralgia, rudis indigestaque moles, must begin anew. No theories can be compared to the recent discovery of the following facts. Eat meat, the urine becomes acid; eat vegetables, it immediately becomes alkaline.

The gastric juice is a powerful acid which readily gives birth by fermentation to gaseous products. In dyspepsia it is therefore a mistaken practice to recommend the use of alkaline salts, by which the digestion of animal food is retarded. The corrosive nature of the fluid accounts for gastric pain, pyrosis, &c., most probably the result of its contact with dry portions of the mucus membrane. By fermentation in the stomach, foul breath and flatulency will be produced; alkaline medicines will be of no avail, but mild laxatives are fully indicated. The digestive power of the gastric juice varies with its heat: below 10 degrees and above 35 degrees, that power diminishes and is completely lost beyond 50 deg. It is therefore not proper to eat very hot substances.—Reaumur's scale.

The stomach being the organ in which animal food is dissolved, meat should not be given in gastric affections; whereas feculent substances, digested in the jejunum, can be safely permitted.—[Medical Times from Jour. de Méd.]

Bile.—The most careful examinations of the urine and blood of a patient with intense jaundice did not enable Scherer to detect in either of them a trace of any constituent of bile except the colouring matter
and cholesterine. In evidence of the speedy transformation which the bileine would probably undergo in the blood, he mentioned that in a large quantity of green fluid vomited, and containing abundant biliary colouring matter, he could not detect a trace of the bileine which it must previously have contained. In the same essay he gives an accurate account of his analysis of the biliary colouring matter which he collected from his patient's urine.

The conclusion respecting the non-existence of the essential principles of the bile in the faeces is confirmed by the delicate test for bile invented by Pettenkofer. To the fluid supposed to contain bile $\frac{3}{4}$ of its volume of sulphuric acid are added by drops, that the temperature may not rise above 140° F., and then from two to five drops of a solution of sugar (one to four parts of water.) Presently a reddish violet colour appears, intense in direct proportion to the quantity of biliary acid. By this test no bile (except the colouring matter) could be found in healthy faeces; but the faces of diarrhoea and those discharged after purgatives contain complete bile. So also, by this test, bile could always be found in the urine of the pneumonic.—[New Orleans Med. and Surg. Journal.

Vomiting of Castor Oil injected into the rectum.—Dr. Griscom reported a case of colic arising from indigestible food. The patient, who was under the charge of Dr. J. R. Wood, was seized with severe pain, with short intermissions, pulse 130 to 140, tongue dry and brown, bowels obstinately constipated, no passage having been obtained by the administration of calomel and jalap, salts and senna, croton oil, and enemata; a large enema was given, which produced evacuations, but this was followed by vomiting, which continued in spite of remedies. The patient was seized on Thursday; on Monday evening following, the vomiting became stercoreaceous, and so completely was the peristaltic action inverted, that an injection of castor oil was returned by the mouth in four hours after it was given. He had been taking calomel and opium. Supposing that the opium might have had an influence in causing the vomiting, it was discontinued, and morphine substituted. The pain and vomiting were immediately relieved, and in 24 hours the patient was decidedly convalescent; 20 drops of morphine were given.—[New York Jour. of Medicine.

Necessity for Accuracy in Diagnosis.—A case is mentioned by M. Rostan, which affords a good example of how much the right treatment of a disease depends on a methodically conducted examination into all the particulars likely to bear on the affection. A female became the subject of an obstinate constipation. The first medical man who saw her suspected the existence of some inflammatory affection, and prescribed the application of leeches. No beneficial effects resulting from this plan of treatment, another physician was consulted, who ordered purgatives; these, however, produced
only temporary relief, and a third medical man was accordingly summoned. He went more methodically to work in his endeavor to find out the real cause of the complaint; he examined the abdomen, and found an ovarian tumor, which was compressing the rectum, and so mechanically caused constipation. The position of the patient in bed was altered so as to relieve the rectum from pressure, and the bowels at once acted.—Gazette des Hôpitaux, April 18, 1846.

M. Gintrac on Diagnosis of Chlorosis.—M. Gintrac's object is to recognize a condition of the economy, characterised principally by paleness of skin, feebleness and palpitations, but yet quite distinct from that of true chlorosis, and intimately connected with irritation of the digestive canal. The pallor of the skin is of a dead-white instead of the yellowish green of that disease; and the debility and palpitations are less marked. The bruit de soufflé too are less constant. The abdomen is found to be tender on pressure, and the digestive functions are entirely disordered—there being loss of or deprivation of appetite, nausea, eructations, constipation or diarrhoea, and sometimes hysterical symptoms. The tongue may be pale, but at other times it is partially red, either at its tip, or in the middle. There is almost always amenorrhcea. M. Gintrac regards these symptoms referrible to the digestive organs as not resulting from pure inflammatory action, but from a complex state of inflammatory irritation and nervous hypersthenia. Preparations of iron and other anti-chlorotic remedies usually aggravate it, while it yields to those of an anti-phlegistic and calming character; such as tisans, milk, infusions of poppies, baths, laxative and emollient enemata, and cupping-glasses to the abdomen. When the symptoms of irritation have ceased, we may resort to tonics and even to iron: but the symptoms then frequently disappear of their own accord.—Gazette Médicale, No. 33.

[The distinction here pointed out is an important one: for there can be no doubt that tonics, and especially steel, are frequently hurtful in consequence of sufficient attention not being paid to the removal of a condition of irritation of the digestive organs.]—Medico-Chirurg. Rev.

A point of Diagnosis between Rubeola and Scarlatina.—It occasionally happens that there is some difficulty of diagnosing the eruption of scarlet fever from that of rubeola, for in the former affection the rash, instead of being, as it usually is, uniformly diffused, occasionally occurs in minute red points and spots, not unlike those of measles. In such cases, when there is difficulty in deciding which disease a particular patient is labouring under, M. Chomel is in the habit of forming his diagnosis by an examination of the sputa. In rubeola, the sputa are invariably, he says, in opaque nummular masses, of a grayish colour, and floating in an abundant liquid. At first sight, they closely resemble the sputa of patients in the second stage of phthisis, yet differ from them in the fact, that the liquid in which
they float is turbid and milky, whilst that in which the sputa of phthisical patients float is clear and transparent.—Lond. Med. Gaz., from Encyclop. des Sci. Méd.

On the Types of Intermittent Fevers.—M. Neppe has endeavored to determine under what circumstances intermittent fevers may manifest a quotidian, tertian, or quartan type. It would appear that the relative frequency of these types varies with the latitude. Out of 3,114 cases of fever treated at Bona and Algiers,—and out of 954 cases treated in the Canton of Monthiel (Ain), the types were as follows:

Bona and Algiers.     Ain, France.

Quotidian fevers ...... 2,181 443
Tertian ....... 901 420 32 91
Quartan ...

All medical writers who have written on fevers, as it exists in northern climates, agree in regarding the tertian as the most common type; while the above facts prove that the quotidian is more frequent in warmer latitudes. The quotidian type, according to M. Neppe, occurs most frequently in warm years, while the tertian form is, on the other hand, most frequent in cold years. The quotidian type of fever appears to be less dependent on marsh miasmata than on accessory circumstances.—Gaz. Méd., from Lond. Med. Gaz.

Remedy for Sea-sickness. (Gazette Médicale de Paris.)—M. Jobard, of Bruxelles, has addressed a note to the Academy of Sciences at Paris, in which he proposes a remedy against sea-sickness. He observes that this is not a pathological affection which can be prevented by medicines. The cause of sea-sickness is purely mechanical; it is not the air of the ocean, neither the odor of the ship which provokes it. Whether sitting or lying down one experiences an alternate movement of elevation and depression while at sea, and it is always during the sinking of the vessel, and never at its ascension, that the sickness occurs; from which circumstance M. Jobard concludes that sea-sickness is produced by the mass of the intestines rising up against the diaphragm and exciting hiccup or vomiting, with compression of the gall-bladder and expulsion of bile from the stomach. It is at the plunge of the ship that the sickness is felt, while a respite is experienced as she rises out of the sea.

The means then to prevent sea-sickness is to prevent the intestines rising up against the diaphragm; and this is accomplished by sustaining them upon the pelvis by a belt. A broad bandage or belt, so as not to compress the stomach, moderately tight at first, and then more forcibly applied, was found to relieve all the passengers of a ship during a long and painful voyage.

The use of the preparations of Nux Vomica against Chorea or St. Vitus' Dance. (Gazette Médicale de Paris.)—Professor Trousseau read a memoir to the Academy of Medicine in Paris on the 3rd
of last November, on the employment of the preparations of Nux Vomica in the treatment of St. Vitus' dance. He said Messrs. Lejeune, Niemann, and Cazenave, had cited some isolated facts, but to Messrs. Forcilhoux and Rouyier, of Lyons, and himself, were due the present mode of using this article. M. Trousseau states that he was lead to this treatment of chorea by two motives: one, because there was almost always incomplete paralysis of one side of the body in this affection; and the other, because the preparations of nux vomica provoked tonic contractions resembling those of tetanus. He treated thirteen patients, ten with complete success. An amelioration was ordinarily manifested after eight or ten days of treatment; the cure affected the oftener at the end of one month.

The author insists upon the necessity of great care in the preparation of this medicine and upon the mode of its administration. He rejects the extract of nux vomica and strychnine, and adopts exclusively the sulphate of strychnine which he dissolves in simple syrup in the proportion of 5 centigrammes to 100 grammes of syrup. He gives at first 10 grammes of the syrup or 5 milligrammes, equal to a tenth of a grain of the salt of strychnine, divided into four or six doses in the course of twenty-four hours. Every day increase 5 grammes up to the moment when the patient manifests itching in the head and slight muscular stiffness. He always goes to the extent of this degree of muscular action. The dose must be increased or diminished according to the effect produced by the medicine. When the disease is nearly cured, the same dose is continued for some days; then it is diminished, and finally left off when there only remains a slight grimace which so often continues in these cases.

While M. Trousseau considers the syrup of the sulphate of strychnine the principal medication in chorea, he still prescribes for other indications that may occur in this affection—bleeding for amenorrhœa with plethora; the martial preparations for chlorosis; antispasmodics for hysteria.

Dr. Hogan, in the New Orleans Medical and Surgical Journal for September, recommends strychnine for chorea in $\frac{1}{30}$th to $\frac{1}{10}$th of a grain for a dose, three times a day.

_Therapeutic action of Chloride of Sodium._ [common salt]. (Gaz. Médicale de Paris.)—M. Plouviers, of Lille, stated to the Academy of Sciences, that since 1842, he has been experimenting with this article. He found that after taking during six weeks, a tea-spoonful, then a tea-spoonful and a half of this salt every morning in a cup of milk, he became stronger, more active and weighed 5 kilogrammes (about 15 pounds) more than he did before. In continuing the use of the salt, he became plethoric, and had to cease taking it. Subsequent experience multiplied and varied, has convinced him that common salt possesses a high importance in assisting digestion. He thinks in persons of a sanguine temperament or apoplectic tendency
it is dangerous; but to weak constitutions without disease, it is incontestably useful; and to labourers and the poor, it would assist much in their nourishment.

The employment of preparations from the Walnut tree against Diarrhoea and Dysentery. (Gazette Médicale de Paris.)—M. Scotti having observed among scrofulous patients who used the preparations of the Walnut tree, an habitual constipation, concluded he could find in this remedy an agent against diarrhoea. In thirty patients he either obtained a cure or at least an immediate amelioration in those not affected by organic lesion. The preparation he prefers is an extract from the green walnut shell or the fresh leaves, obtained by decoction and successive evaporation. Dissolve from 8 to 12 grammes, about 25, of this extract in a kilogramme, about 2 pints, of mineral lemonade, and take a third or a half tumbler of this drink four times a day.

Tannate of Iron in Chlorosis.—M. Benedetti considers that the tannate of iron (ink) is one of the best remedies in the treatment of chlorosis. The dose may be from about eight to thirty grains daily; and the patient commonly recovers in from twelve to twenty-five days.

The tannate of iron employed by him is prepared by dissolving iron filings in dilute sulphuric acid, precipitating by carbonate of soda, so as to obtain a pure carbonate of iron. Forty-four parts of this carbonate, in a state of dry powder, are to be added to nine parts of pure tannic acid, dissolved in boiling water. The mixture is stirred and evaporated until the tannate is obtained as a dark, insipid, uncrystalline compound. It may be given suspended in syrup, or in the form of pills.—Lond. Med. Gaz., from Gaz. Méd.

Dysentery Syrup.—The Boston Med. and Surg. Jour., gives the following as an approved recipe for Dysentery: “It is made of a decoction of the rubus villosa, spina tormentosa, slippery elm, Iceland moss, rhubarb, sugar, and a small portion of brandy, in such proportion as experience justifies.”—Western Lancet.

Alkalies in the Treatment of Hooping-cough.—Dr. Allnat, London, attributes the spasmodic action of the glottis, which occurs after the febrile action has somewhat subsided, to the presence of acid in the stomach; to relieve this, alkalies—ammonia, carb. potass, &c.—are advised. He says:

After preliminary purgation with calomel, (conjoined with antimony, if the febrile symptoms run high,) and an occasional emetic to clear the stomach, nothing in my experience is so efficacious as small and repeated doses of the carbonate of potassa. The following combination has been extensively distributed to the poor in seasons when hooping-cough has raged as an epidemic, and I can attest the almost invariable success which has attended its administration—
what portion of the merit is due to the cochineal I do not know:—
Take of carbonate of potassa, one drachm; cochineal, ten grains; boiling water, half-a-pint. For an infant, one teaspoonful to be taken thrice daily, the dose increased according to age.—[London Lancet.

**Internal administration of Iodine.**—M. Marchal de Calvi, of the Hospital of Val-de-Grace, has been employing for some time past iodine in a new form. The iodine is dissolved in oil, in the proportion of 1 grain to 15 grains. He takes afterwards a certain fixed quantity of the solution, mixes it with gum in a mortar, and forms an emulsion.

M. Marchal commences by prescribing one grain of iodine, or eighteen grains of the oily solution. The dose may be gradually augmented to six grains. Notwithstanding so large a dose has been used no unpleasant effects have been produced on the digestive tube. The patients preserve their appetite, and digestion is performed properly. This new preparation has been used with remarkable success in many cases of scrofulous swellings of the glands that had attained very great volume. Iodine in this form remains for a much longer time in the economy than the iodine with potassa. In place of iodide of potassium, M. Marchal uses the iodide of sodium, because he thinks it more active, from its containing a greater equivalent of iodine than the preparation containing potassa.—[West. Journ. of Med. and Surg.

**Combination of Carbonate of Iron with Sulphate of Quinine in Remittent Fever.**—Prof. Lippich, of Padua, recommends the addition of the carbonate of iron in the sulphate of quinine, in the treatment of periodical fevers. The following is his formula: \[ R. \text{ Carbonate of iron, one gramme; sulphate of quinine, one gramme; extract of taraxacum, q. s. } \] To be made into a mass of proper consistency, and divided into thirty pills, two of which are to be taken every two hours. The carbonate of iron may be gradually increased to two grammes.


**Hydrate of Lime in Diarrhoea.**—Simple syrup, saturated with hydrate of lime, has been employed by Dr. Capitaine as an antacid, in doses of from one scruple to half a drachm: and at the hospital Neckar, it has been given with much benefit instead of cow’s milk in the diarrhoea of children.—[St. Louis Med. and Surg. Journal.

**Prescriptions of Prof. Linton, of St. Louis, for Dropsy.**

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The preparations of iron are, we believe, the best tonics which can be used in those cases of dropsy, (and they are numerous) in which a roborant treatment is indicated.

We cannot help regarding a sort of old woman’s prescription, a
roughly prepared acetate of iron made by putting a handful of rusty nails into a pint of old cider, as one of the best, if not the best, preparation for this invaluable tonic. We have "seen with our eyes" its happy effects in scores of cases, to say nothing of that less to be credited testimony—what we have "heard with our ears."—[Ibid.

Dr. W. L. Sutton of Georgetown, Kentucky, in an able article on Scrofula, submitted to the Medical Society of Tennessee in May 1846, and published in the November No. of the Western Journal of Medicine and Surgery, draws the following conclusions on this subject:

Conclusions.—After such reflections as I have been able to make, I arrive at the following conclusions:

1st. That in a vast majority of instances scrofula owes its existence to inheritance; yet

2d. That there is no absolute necessity that a child having a scrofulous parent shall be scrofulous; on the contrary,

3d. That when one parent is scrofulous and the other not, a child which resembles the scrofulous parent will be much more apt to have scrofula than one which resembles the other parent; in fact, that the latter may have a well-grounded hope of escape.

4th. That the liability by inheritance depends upon a general, not upon a specific law, which is applicable to other diseases besides scrofula.

5th. That whilst a child born of scrofulous parents may escape, one born of parents not at all scrofulous, may have the disease.

6th. That scrofula depends upon an undue preponderance of the white parts of the blood, and the white tissues in the body.

7th. That in our treatment we should endeavor to restore a due proportion of the red particles to the blood, and of the red tissues to the body.

8th. That to effect this there is no specific; but we must be guided by general principles and rational views, precisely as is necessary to treat successfully any other disease.

9th. That how important soever medicine may be in the management of the disease, hygienic rules are by no means less so.

Cure for Bite of Rattle Snake.—Dr. Nathan Holmes, of St. Louis, Mo., announces that whiskey, or any other stimulus, freely given till there is a high pulse, will cure the bite of the rattlesnake. He says that he doubts whether fifty rattlesnakes could poison a man when fully drunk.—[Boston Med. and Surg. Journal.

Alum and Nitre for Gonorrhœa.—Dr. Foster reported having recently used alum pulv. and nitrat. potass. grs. xv. and x., three times a day, with the most happy effect, in two cases of gonorrhœa. In one case the discharge had existed ten days; in the other, two months.—[New York Journal of Med.
Mode of arresting Hemorrhage from Leech-bites.—Dr. Houston recommends the following plan for preventing excessive bleeding from leech-bites, which he has found invariably successful. Take a small pinch from the felt of a beaver hat, pile it on the bite; or if there be several points, pile one respectively on each, and spread over the whole a piece of thin muslin, drawing it tightly, so that any blood that flows must pass directly through both; then with a fine sponge drying up the blood as it oozes out, and in a short time both felt and muslin will have become dried by the coagulation of the blood in the thin fine meshes, and the hemorrhage arrested. The muslin may then be all cut away, except the adhering points, which, in the course of a couple of days, will of themselves drop off, leaving the parts healed, and free from any such disfiguring marks as those which necessarily follow cautery, caustics, or needles.—[Dublin Hosp. Gaz.]

Operation for Aneurism.—The following conclusions, as the result of his experience in operations for aneurism, are drawn by Mr. Guthrie, in a lecture delivered by him at the Royal Westminster Ophthalmic Hospital:

1. That the theory of the operation of aneurism, as dependent on the collateral circulation, cannot be applied with safety to spurious aneurisms of recent occurrence dependent on wounded arteries.
2. That it is inapplicable to wounded and bleeding arteries.
3. That the length of time a spontaneous aneurism has existed is of consequence, as connected with the collateral circulation; although an aneurism should never be allowed to attain that size which may render it injurious to the surrounding parts.
4. The collateral vessels are at all times and under all natural circumstances capable of carrying on the circulation in the upper extremity, whatever disease or injury may affect the principal trunk, provided a due degree of care be taken to maintain the temperature of the part. Whenever the reverse takes place, it is an exception to the general rule.
5. After operations for aneurisms in the lower extremity, the collateral branches are almost always equal to carry on the circulation through the limb.
6. When the principal artery of the lower extremity is suddenly divided, without any previous disease having existed, mortification is not an uncommon occurrence, and is more likely to take place in old than in young persons.
7. When under such circumstances the principal vein is also divided, mortification seldom fails to be the consequence.—[Med. Times.]

Treatment of White Swelling.—Dr. Blakey details two cases of the successful employment of the Chimaphila Umbellata (pipsissewa, wintergreen) in the treatment of white swelling. The first case, a boy of a scrofulous family, is thus described:

"When I examined my patient, I found one of his knees three
times its natural size, the skin of the leg of an unnatural ashy color, the boy being tolerably black for one of his race; considerable wasting of the limb, pulse 90, and some white fur upon his tongue. I looked upon the case as scrofulous white swelling, and concluded in my own mind there could be little done towards effecting a radical cure, as I had often treated and seen such cases treated, but had never known a cure to follow, but more or less lameness to inevitably succeed all our efforts, if we did not ultimately have to resort to the knife to rescue the sufferer from the grave.

I commenced giving my patient the infusion of pipsissewa, a pint to be drank each day. The formula for making it I took from Wood and Bache's Dispensatory, and twice a day, morning and night, I had a fresh poultice made out of oat-meal and the infusion, and applied to the whole knee; diet light, and to keep the recumbent position."

The treatment was continued from Feb. 5th to April 15th, when the patient was discharged cured.

**Topical Treatment of Certain Diseases of the Skin.—**M. Cazenave prescribes, often with success, the use of simple acidulated lotions, in certain slight cases of acne, behen, pityriasis, herpes and even eczema. He often, also, in cases of impetigo, when the crusts have fallen, employs with advantage a solution of alum, as follows:

- Alum, ... ... two drachms.
- Infusion of roses, ... ten ounces.

The alum may be increased to three drachms, but the lotion that succeeds the best is the following:

- Bichloride of mercury, ... two grains.
- Chlorohydrate of ammonia, ... two grains.
- Emulsion of almonds, ... eight ounces.

When in eczema, the eruption is chronic, M. Cazenave makes use of the following:

- Azotic acid, ... 25 drops.
- Chloro-hydric acid, ... 25 drops.
- Distilled water, ... 9½ ounces.

*[Jour. de Pharm., from South. Jour. of Med. and Pharm.]*

**Prof. Porta on Deligation of Arteries.**—Of 600 cases of the ligation of the large arteries on record, gangrene has occurred in 50. Of 132 operations in the carotids, it occurred in 1; of 156 cases of ligation of the innominate, subelavian, axillary and humoral, in 7; and of 302 operations in the lower extremities, in 42.—[Medico-Chirurg. Rev.]

**New Sign of Death.**—M. Ripault has called the attention of the French Academy of Science, to a new sign of death, which consists in the flaccidity of the iris; the pupil losing its circular form when the globe of the eye is pressed in two opposite directions; but remains round, notwithstanding the compression, when life is not extinct.

*[Western Lancet.]*
MEDICAL INTELLIGENCE.

Notice of the III. Volume.—In issuing the first No. of a new volume, we again solicit the assistance and kind co-operation of our subscribers, to sustain this Journal. Our experience has taught us, that the labour of conducting the work is sufficient to occupy our time and attention, without being compelled to write articles and essays for it. We would much prefer, moreover, to publish communications coming from our friends. We respectfully ask our subscribers to increase the usefulness and importance of the Southern Medical and Surgical Journal, by contributing to its pages. Essays on any subject connected with medicine, report of cases, or facts relating to the profession, will be thankfully received from any source.

Our Publisher will be obliged to any one for an increase to the subscription list.

A new prescription for Burns and Blister.—During a recent visit to Aiken, we learnt from a medical friend, a domestic preparation used in that neighborhood for burns, blisters, and denuded surfaces. It is an ointment made of equal parts of white of egg, beaten up to a froth, and fresh lard. A little morphine or chloride of sodium we think might be added with advantage.


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18 Fair days. Quantity of Rain 2 inches and 15-100. Wind East of N. and S. 12 days. West of do. 14 days.