

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
- Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
- Includes supplementary materials /  
Comprend du matériel supplémentaire
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

*with Great & Co. 90*  
*2 St. James*

# THE BRITISH AMERICAN JOURNAL

## OF MEDICAL & PHYSICAL SCIENCE.

EDITED BY  
ARCHIBALD HALL, M.D., L.R.C.S.E.,

Lecturer on Chemistry, University of McGill College; Member of the Medical Board of Examiners for the District of Montreal; one of the Physicians to the Montreal General Hospital; one of the Consulting Physicians to the University Lying-in-Hospital, &c.

VOL. V.]

AUGUST, 1849.

[No. 4.

### CONTENTS.

#### PART I.—ORIGINAL COMMUNICATIONS.

##### I.—MEDICAL DEPARTMENT.

- ART. XVI.—On the Calomel Treatment in Algide or Asiatic Cholera. By Archibald Hall, Esq., M.D. .... 85
- ART. XVII.—The Appearance of the Cholera in Kingston. By Horatio Yates, Esq., M.D., Kingston 89
- ART. XVIII.—Preparations of Iron in Cholera. By Thomas Reynolds, Esq., M.D., Brockville..... 90

##### PART II.—PERISCOPE.

###### I.—PRACTICE OF MEDICINE AND PATHOLOGY.

- On Cholera and its Treatment, (Continued)..... 91
- On Inunction with Lard in Scarlatina..... 96
- Sequel to the Cholera in Paris..... 97
- The Royal Society..... "
- Melanosis of the Liver, Pancreas, Kidneys, Ovaries, Eye-ball, &c. .... "
- Treatment of Neuralgia according to their Seat..... 98
- Chorea successfully treated by Arsenic..... "
- Quinine in Cholera..... "
- Employment of Nux Vomica in the Diarrhoea of Exhaustion..... "
- On the Absorption of Insoluble Bodies..... 99
- Analysis of the Blood in Cholera..... "
- On Influenza and Ozone..... "
- Ozone and its Connection with Epidemic Diseases... 100

- On the Various Modes of Treating Cholera now in force in the Hospitals of Paris..... 100
- Tetanus..... 102
- Theory concerning the Cause of Diabetes..... "

###### II.—PHYSIOLOGY.

- On the Pancreatic Juice..... 103
- The Intention of Hiccup..... "
- Source of Sugar in the Animal Economy..... "

###### III.—MEDICAL JURISPRUDENCE.

- Singular case of Insanity..... 104
- Homœopathy and Cholera..... 105
- Cholera in New York, and its progress in the United States..... "

#### PART III.—EDITORIAL DEPARTMENT.

- To our Subscribers..... 107
- To our Readers..... "
- The Cholera in Canada..... "
- The Medico-Chirurgical Society..... 108
- Police..... "
- Homœopathy and Cholera..... 110
- Dr. Schmutter..... 111
- Obituary..... "
- Meteorological Register, Montreal, June..... "
- " " Toronto, " ..... 112

Communications on Scientific subjects and Books, &c., for review, to be addressed to the Editor: on all other matters connected with the Journal, to the Publisher: in either case, Post-paid—No communications for insertion in the succeeding number will be received after the fifteenth of the month.—From this rule there will be, in future, no departure.

### MONTREAL:

PRINTED AND PUBLISHED BY J. C. BECKETT, 211½ ST. PAUL STREET.

Agents for the United States, Messrs. R. & G. S. Wood, 261 Pearl Street, New York.

MDCCCXLIX.

THREE DOLLARS PER ANNUM IN ADVANCE.

# MEDICAL JOURNALS,

Published by RICHARD and GEORGE S. WOOD, No. 261 Pearl Street, New-York.

## THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW, AND JOURNAL OF PRACTICAL MEDICINE.—*Published Quarterly, at \$3 per Annum.*

THE MEDICO-CHIRURGICAL REVIEW had, for very many years, a reputation unequalled by any other journal, as the leading Medical Journal of Europe, and a standard work in medical literature. Being republished in this country for more than 25 years, it was universally known to the Medical Profession here, and was pronounced by some of the most eminent "the best medical journal extant." The British and Foreign Medical Review, though not so long established, was nearly as well known; and was conducted with such spirit and talent, as fully to entitle it to rank with its illustrious predecessor. These two works are now united, (under the above title,) and will be sustained by the united contributions of the writers, whose talents have given such eminence to both. Of the merits of the work produced by this combination, nothing need be said. The American republishers hope, however, to increase its value by their

## ADDENDA TO THE MEDICO-CHIRURGICAL REVIEW, OR QUARTERLY RETROSPECT OF AMERICAN PRACTICAL MEDICINE AND SURGERY:

A valuable Abstract of American Medical Intelligence; compiled from all the American Medical Journals; which will be sent, *gratuitously*, to all who remit payment to the publishers, postage free, in advance.

## WOOD'S QUARTERLY RETROSPECT OF AMERICAN AND FOREIGN PRACTICAL MEDICINE AND SURGERY.

*Price One Dollar per Annum, n Advance.*

This work is designed to meet the demands of this "high-pressure" age, by furnishing the physician and surgeon the means of keeping pace with the progress of knowledge in their respective departments of science, at the *least possible cost of time and money*. It consists of condensed reports of cases and their treatment, with occasional remarks, and abstracts of the medical literature of the day, collected from the whole field of medical science, American and Foreign, with announcements of all new publications of interest to the profession.

Its plan is, in the main, that which has been so much approved in "Braithwaite's Retrospect," and "Ranking's Abstract," with the superadded advantages of a fuller view of *American Medical Literature and Science*, a more frequent emission, and reduction of price; and it is hoped will meet with the general approbation of the Medical Profession. It was suggested by some members of the profession as a desideratum in medical literature not yet supplied by any journal; and the publishers intend, if well sustained in the undertaking, to spare neither pains nor expense to make it worthy of the most extended patronage.

It will be seen at once that, at a price so low, it can only be supported by a very extensive circulation; but the advantages offered are such, that this is confidently anticipated; and they request all to whom this is sent who approve the plan, to aid them by bringing it to the notice of their professional brethren.

Authors and Publishers wishing their works reported, will please forward copies.

### RECOMMENDATIONS.

A work like "WOOD'S QUARTERLY RETROSPECT," presenting a view of American and Foreign Practical Medicine and Surgery, so extended as to omit nothing of material interest, yet so condensed as to meet the demand of those whose want of time or means prevents their access to the various sources from which it is compiled, was much needed, and we cordially commend it to the patronage of every member of the Medical profession.

Alexander H. Stevens, M.D. Pres. and Emeritus Prof. of Clin. Sur. in Coll. of Phys. and Surg.	Gustavus A. Sabine, M.D. Dem. of Anat.
J. M. Smith, M.D. Prof. of Theo. and Prac. of Med. and Clin. Med. Clin. Med.	V. Mott, M.D. Prof. of Surg. and Path. Anat. in University of New York.
John B. Beck, M.D. Prof. of Mat. Med. and Med. Juris.	Samuel H. Dickson, M.D. Prof. of Theo. and Prac. of Med.
John Torrey, M.D. Prof. of Bot. and Chem.	Granville S. Pattison, M.D. Prof. of Genl. and Descrip. Anat.
Robert Watts, Jr., M.D. Prof. of Anat.	Martyn Paine, M.D. Prof. of Inst. of Med. and Mat. Med.
Willard Parker, M.D. Prof. of Prin. and Prac. of Surg.	G. S. Bedford, M.D. Prof. of Midwif. and Dis. of Wom. and Child.
C. R. Gilman, M.D. Prof. of Obstets. and Dis. of Wom. and Child.	John Wm. Draper, M.D. Prof. of Chem.
Alonzo Clark, M.D. Lect. on Phys. and Path.	Wm. H. Van Beuren, M.D. Prosec. to Prof. of Surg.
	Wm. Darling, M.D. Dem. of Anat.

Since its first appearance the RETROSPECT has met with general approbation; and many testimonials in its favor might be produced; but the publishers deem it unnecessary to give more than the foregoing from the Professors of the two Medical Schools of New York; hoping that as the price is so low, those who wish to know more of it, will give it a trial for one year and ascertain its character from the work itself.

Subscribers in ordering these works will please write their names legibly, and at full length, adding their respective titles and the names of the town, county, &c., of their residence.

All other Medical Journals and Medical Books in general, for sale. Catalogues given on application.

THE  
**BRITISH AMERICAN JOURNAL**  
OF  
**MEDICAL AND PHYSICAL SCIENCE.**

Vol. V.]

MONTREAL, AUGUST, 1849.

[No. 4.

ART. XVI.—ON THE CALOMEL TREATMENT IN ALGIDE OR ASIATIC CHOLERA.

By ARCHIBALD HALL, M.D., L.R.C.S.E., Lecturer on Materia Medica, McGill College.

Dr. Graves of Dublin, in his recent second edition of his "clinical lectures," alluding to the treatment of Asiatic or Algide Cholera, by calomel, thus remarks: "Before we proceed further, I may observe, that the principle on which the calomel treatment was employed in cholera arose from almost constantly observing that there was a total deficiency of bile in the stools. Soon after the supervention of an attack, the alvine discharges were observed to be white, and without the slightest tinge of bile, and on this very remarkable symptom practitioners dwell almost exclusively, thinking that the patient's only chance lay in restoring the action of the liver. Now it is obvious that the absence of bile in the stools is no more a cause of the disease than is the deficiency of urea in the kidneys, or of serum in the blood. Viewing the disease in this light, it would be just as reasonable to give a diuretic to restore the secretion of the kidneys, as to give calomel to produce a flow of bile, &c. &c. I have, therefore, no hesitation in saying that the calomel treatment has no claim to merit on the ground of theory; and, as far as I have observed the results of it in this country, it seems to be of no practical value in the treatment of cholera."

With every deference for the high character of Dr. Graves, and to that position in the profession to which his talents justly entitle him, and which he has fairly earned, the experience of the calomel treatment in this city, during the present epidemic, is so completely at variance with the above recorded opinion, as to lead to a doubt whether it was fairly pursued in Ireland, or, that Dr. Graves has (what I do not believe) underrated it as a means of relief, for the purpose of advancing a new method of treatment, which might be deemed peculiarly his own. I allude to the treatment by *acetate of lead and opium* proposed by that gentleman.

Into the remote cause, inductive of that peculiar condition of the system characterised by the train of symptoms known under the name of Asiatic Cholera,

it is not my present purpose to inquire. It is a matter of little moment whether it be of an endemic or epidemic origin; whether terrestrial or atmospheric, whether depending on disturbed electrical equilibrium or of a fungoid character; at the present moment I deal with its effects, and no one who has witnessed the disease can question this statement, that superadded to the ordinary phenomena, there is witnessed a manifest impression upon the nervous centre of a depressing nature, and that this impression is antecedent to the evolution of the several symptoms which follow, and would appear to be inductive of them, varying in intensity, however, in different cases; prostrating the vital and dynamic forces at once in some, effecting its purpose more slowly but not less surely in others, and in a third class manifesting itself in a more manageable form in the shape of the diarrhœas now so prevalent.

Examining again into the pathological changes induced by the disease, in by far the majority of cases, we find, with the exception of congestion of the internal blood vessels, but insufficient causes of death. Sometimes the mucous membrane of the alimentary canal is found to be inflamed, at other times not; sometimes pulpy and thickened, at other times blanched and anæmic. Dr. Boehm, at present so worthily supplying Dr. Deiffenbach's place at Berlin, in a recent work shows that "the chief pathological alteration of the mucous membrane in cholera consists in a desquamation of the epithelium," by which it is often altogether thrown off, and that the process commences at the lower portion of the ileum where the injection of the bloodvessels is most distinctly seen. The liver is occasionally found congested, at other times perfectly healthy in appearance. The kidneys have always been found healthy, although suppression of urine is one of the most marked symptoms of the disease. The gall bladder is almost always found distended with bile. The bladder contracted; and the brain and spinal cord most usually normal in their appearances. What, then, is the cause of death, for there is nothing in these pathological alterations, which should not in analogous cases, afford the fairest anticipations of suc-

cessful treatment? Take we into consideration the sudden collapse, the enormous drain upon the circulating fluid, the complete arrest of secretion, whether in the salivary glands, pancreas, liver or kidneys, and the utter prostration; couple all this with the deficient and inadequate pathological changes, and we *must* look to an impression on the nervous centre as the *first cause*, the active agent, inductive of the mischief, and all the symptoms concur in pointing out the ganglionic system, or the great sympathetic, as the one immediately affected, influenced in its innervation, and destroying, by consequence, the equilibrium of the circulation, and the tone of the capillaries, especially in the intestinal canal; and impeding secretion, and, to a marked extent, absorption.

Based upon the observations made, would appear to arise three important indications:—1st, The restoration of the ganglionic system to its pristine condition; 2nd, The arrest of the vomiting and purging; and 3rd, The re-establishment of the various secretions by excitation of the glandular viscera. Experience has amply illustrated this fact, that the attainment of the first of these indications cannot be effected by stimuli directly applied. No line of treatment in cholera has proved more signally unsuccessful than the stimulant one unaided. Ether, ammonia, alcohol in its various forms, camphor, opium in small and frequently-repeated doses, capsicum, &c., have all failed. This is too well established to admit of dispute. The first indication, then, must be sought to be fulfilled by the exhibition of medicines calculated to secure the second and third, but especially the latter, although the exhibition of stimulants is at the same time necessary and proper to sustain the powers of the system, and to *secure time*. Will what is called the saline treatment effect this? Assuredly it will not; and it is difficult to conceive the precise object to be attained by its adoption. It was at one time supposed that the saline constituents of the blood became diminished in their natural quantity. The experiments of Drs. McLagan, Christison and Robertson, of Edinburgh, prove the reverse of this. What is called the Russian mode of treatment subserves no better end; and the repeated exhibition of opium in the stage of collapse, appears to me to be most unlikely to answer any good purpose. There is no medicine with which we are acquainted more surely adapted to suspend secretion than opium, and there is therefore none more unfitted for protracted employment in cholera, in which secretion is suspended,—and, on the contrary, no medicine seems better adapted to fulfil the several indications than mercury, effecting its purpose by the crethism consequent upon its steady administration, in which the whole system participates.

Calomel in large doses is well known to be a powerful sedative in cases of irritability of the stomach, attended with nausea and vomiting; and in the treatment of sporadic and even infantile cholera, no medicine which we possess presents higher claims to consideration. The experience of the first physicians in this Province and the United States might be cited in its favor; and that it should present itself prominently to consideration in the management of an analogous condition of the stomach in the algide variety of the disease, is by no means surprising. Having been exhibited in the commencement of treatment, when symptoms demand it, in the manner and for the purpose indicated, it should become an object of equal importance to secure its constitutional influence by its steady administration in smaller, frequently repeated doses, combining it with stimulants, especially in the cyanic stage, with the twofold view of exciting the absorbents, and securing time by sustaining the vital powers. When exhibited in the large doses, at the commencement of treatment, especially if combined with morphia, it will be found to act in the majority of cases in the most satisfactory manner, allaying the vomiting almost instantaneously; while we afterwards seek to establish its constitutional effects by its exhibition in smaller doses, repeated every half-hour or hour, in accordance with the necessity of the case, combined with camphor or assisted by sulphuric ether, or some other stimulant of a similar character.

In my own practice, since the epidemic which now prevails commenced, I have had the good fortune to encounter, up to the present period, but ten cases of Cholera of the Asiatic variety; and as I have treated them on the principles laid down, I will let the results speak for themselves. To avoid prolixity, I will be as brief as possible in the descriptions, which will be given chiefly for the purpose of pointing out the stage of the disease at which the treatment commenced.

Case 1.—July 3, 6 P.M.—I was requested by Dr. H. to visit his wife, who was suffering under severe diarrhoea, which had existed during the greater part of the day. The evacuations were frequent, occurring about every half hour, and of a bilious character, attended with griping and some nausea; her pulse was regular but weak, and her countenance was natural. I requested Dr. H. to give her some powders containing Pulv. cretæ. comp. c. opio., to which I felt desirous of adding calomel, but to which objection was made, in consequence of the debilitating effects which she supposed it induced, and which she remembered having experienced at an early period of her youth. Satisfied, *pro tempore*, with the prescription, I left, and visited her at 10 p.m. I now found her in a state of incipient

collapse, eyes sunk, nails blue; arms, legs and feet cold, and the legs cramped; and immediately before my entrance, she had had a copious evacuation, presenting the rice water character, and she had vomited several times. The following prescription was immediately ordered:—

R. Hydrarg. Chloridi gr. v.  
Pulv. Gum. Camph. gr. ij. Fiat pulv.

One to be taken every fifteen minutes until the vomiting ceased.

11 P.M.—Mrs. H. has had four evacuations, of the rice water character, since last visit, but much diminished in quantity; the irritability of the stomach still continues. The cramps have subsided, and the pulse is rather weaker; ordered ice in the mouth; and the powders to be continued every hour, with small quantities of Brandy and water from time to time.

12 P.M.—Vomiting and purging quite ceased; the former from the moment of using the ice; the powders still to be continued.

July 4, 3 o'clock, A.M.—Considerably improved in every respect; has had one motion, of a bilious character, and moderate in quantity. The medicines were now discontinued, and calf's foot jelly, with beef tea, substituted, each in small quantities, from time to time. From this period she convalesced from the attack, although a fever, of a remittent type and mild form, supervened in the course of a couple of days, and in the course of the week subsided.

The above case was a mild one, and yielded readily to the treatment employed. It was one of the earliest cases in this city.

Case 2.—July 8.—Was this morning requested by Dr. Scott to visit Mr. T. S., in consultation. This gentleman had been suffering under diarrhoea, for at least the day preceding the attack, and had partaken on the day previously of a salmon dinner. The diarrhoea was increased by this, and continued during the night, accompanied by vomiting. Dr. Scott was summoned to his bedside about 5 a.m., and prescribed two or three large doses of calomel. When seen at 9 a.m., the vomiting and rice water purging still continued: he was cold, covered with clammy perspiration; countenance collapsed, tongue cold, skin blue, and the skin of fingers in longitudinal wrinkles; pulse almost imperceptible at the wrist; cramps in the legs; suppression of urine, tinnitus aurium, and whispering voice.

The calomel and camphor were now advised, in doses of 5 grains and 2 grains respectively. They were exhibited in pill form every hour, conjoined with sulphuric ether in camphorated mixture, and brandy and

water; external applications were also assiduously applied.

9 P.M.—Found the patient but little improved; the vomiting and cramps had ceased, but the rice-water dejections still continued. Pulse almost imperceptible. In every other respect, there was no change. The administration of the medicine in pill form was now discontinued, and that of powder substituted, given every half hour; steadily pushing on the collateral treatment.

July 9, 9 A.M.—Patient improved in every respect; heat of surface returned; tinnitus aurium gone; voice restored; pulse full and soft; countenance improved, and blueness disappeared; reaction had set in during the night, and he had made water once, and had had two evacuations, of a dark bilious character. He was an altered man in every respect, and expressed himself to that effect. A mildly nutritious diet was now ordered, with other necessary directions. After we left, I am informed, he got up, shaved and dressed himself, and committed other imprudencies. I was sent for on the evening of the 10th, by Dr. Scott, and found him dying. He was in a semi-comatose state, and was sinking under a typhoid attack, which, I have not the slightest doubt, was due as much to his own imprudence as to an enfeebled constitution.

In this case the recovery from the state of collapse, and this, too, of the worst description, was complete, and can be attributed only to the steady employment of the calomel.

Case 3.—Mrs. R. P. had been suffering under a neglected diarrhoea for several days. Shortly after an attack of vomiting, I was summoned to see her, on the 14th July. She had had several "watery" stools, as she called them, and now, in consequence of the vomiting, sought relief. Symptoms of collapse were setting in, and there had been slight cramps in the legs, and considerable griping. One dose of 3ss of calomel, with gr. i. of muriate of morphia, sufficed to allay the vomiting, in the course of half an hour; the calomel alone was repeated at the expiry of that time, and was followed by calomel and camphor, in three grain doses of each, every three hours, under which, the symptoms completely yielded. This patient became salivated, a matter of little moment, when the question involved is one of life or death.

Case 4.—Mrs. M'C had been seen by Dr. Nelson in my absence on the evening of July 16; on the morning of the 17th I was called to attend her at 7 a.m. She had been passing rice-water stools during the night, and the stage of collapse was fairly setting in, as indicated by her countenance, her pulse, and her skin. The same

treatment was pursued as in the preceding cases, and the result was of the same character, as far as the disease itself was concerned, for which I was consulted. She has perfectly recovered.

Case 5.—I was called at half-past four a.m. to visit Mrs. A. She was laboring under vomiting, purging, and cramps of the legs. The diarrhœa, however, had been severe for the preceding six or seven hours, and gradually assumed the rice-water character, and the appearance of the countenance, skin, and pulse, indicated the supervention of speedy collapse. A similar line of treatment was adopted as in the last cases; and although the diarrhœa was more obstinate than usual, yet after the gums were slightly touched it yielded, and she is now perfectly recovered.

Case 6.—July 25.—At 8 p.m. I was hurriedly called to see Mrs. McK., aged 70. When seen she was laboring under all the symptoms of collapse with vomiting, and rice-water stools, superadded to which were violent cramps of the lower extremities. I left with her three powders; No. 1 containing ʒss. of calomel and gr. 1 of mur. morph.; No. 2 ʒj. of calomel, and No. 3 grs. x of calomel. On my second visit, one hour after, the vomiting and cramps had disappeared; and I prescribed calomel combined with camphor, every hour. Before this time she had passed several rice-water stools; but on my visit next morning I found that the diarrhœa of peculiar character had subsided, and she had passed a couple of dark colored stools. She had attained the age of 70 years, and died in the course of twenty-four hours after, of exhaustion. In this case recovery from the state of collapse was also complete.

Case 7—July 25.—At 9½ a.m., I was requested by Mr. M. to visit a young man in his employ, named W. A. He had been suffering under a severe diarrhœa for the five preceding days, for which he had obstinately refused to take advice. Finding himself worse than usual, and vomiting coming on, he consulted Dr. McCulloch about 6, a.m., who prescribed for him, with instructions to let him know his state at 9, a.m., if not better. In the absence of Dr. McC., I visited him. Collapse was just supervening; his nails were blue; eyes sunk; pulse small but distinct; vomiting; rice-water stools, and severe cramps of the lower extremities. I gave him immediately ʒss. of calomel, and 1 gr. of morphia, to be followed by ʒj. of calomel in a half hour, and 10 gr. more in another half hour; and left him several powders, each containing ʒj. of calomel and 3 of camphor, one to be given every hour. Brandy and water was also ordered, with the usual external applications, sinapisms, &c. At 2,

p.m., the vomiting had ceased, and the diarrhœa had moderated, although the character of the stools continued the same. The pulse was more feeble; I continued the powders every half hour. At 6, p.m., I considered the young man to be dying. He was cold, pulseless, in a state of semi-insensibility, and unable to articulate or to swallow, with his eyes fixed, and conjunctivæ injected. In consequence of the supervention of these fatal signs, the attendants had intermitted the medicines for the preceding hour or two. He was now seen by two friends, who, considering that while there was life there was hope, determined to persevere with the treatment pursued during the day, and at the same time continued the external means. In the course about three hours, he passed a couple of bilious, dark stools; and about 10 o'clock, they felt pulse at his wrist. Re-action had commenced. Dr. McCulloch was found in the neighborhood, and requested to visit him; treatment appropriate to this stage was now adopted, and the young man has recovered from the cholera, although he still labors under consecutive typhus fever.

Case 8.—July 26.—I was called at 11 a.m. to attend G. M. He had attained the age of 40 years, but possessed the constitution of a man of 60, from previous hard living. He was a storeman, and although laboring under a disease of no ordinary character, yet attended to his duties, till compelled by his condition to give up. I saw him about 11 o'clock, about seven hours after the commencement of the severe diarrhœa alluded to. He was walking about, had tinnitus aurium, whispering voice, a collapsed countenance, and feeble pulse. I immediately ordered him to his bed, and left him ʒss. of calomel with morphia, the calomel to be repeated in half an hour; immediately after I left I understood he began to vomit, and was severely attacked by cramps. On my return in the course of an hour and a half, I found that the vomiting had ceased after the exhibition of the calomel; the cramps continued severely, with the purging, which was of the rice-water character, or as his wife termed it, like "sour ginger beer." Three doses of calomel and camphor were now ordered, one to be given every hour. At half-past two p.m. I again visited him, and found but little alteration in the symptoms. The blueness of the skin was complete, pulse more feeble, and the state of collapse more perfect. The calomel and camphor powders were now ordered to be administered every half hour, alternating them with sulphuric ether in camphorated mixture; port wine was also given along with the powders, and ice in the mouth to allay thirst. At 5 p.m. the diarrhœa had subsided to a marked extent, and the vomiting was wholly allayed;

—He continued gradually sinking until about 2 a.m. next morning, when he died.

This case is the only one which has occurred to me, in which recovery from the state of collapse did not take place.

Case 9—July 29.—At 4½, A.M., I was called out of bed to visit the child of Mr. G. M., residing in one of the most infected parts of the Quebec Suburbs. The child, 2 years of age, had been seized with vomiting and severe purging during the night, which excited alarm when the latter was found to assume the rice-water character. Dr. Deschambault, living in the neighborhood, was forthwith called in, who prescribed for the child; I was afterwards sent for at the hour specified, the parents having been for many years patients of my own. The child was quite cold, with a filiform pulse, and collapsed countenance. Shortly before my arrival, it had a stool, which I saw, of decided rice-water character. The vomiting was still urgent. I ordered the child four grains of calomel, to be given every half hour until the vomiting ceased, leaving four such powders, and afterwards the calomel in two grain doses, to be exhibited every hour, alternated with a tea-spoonful of a mixture containing equal parts of camphorated mixture and water. When seen at 10 o'clock, Mrs. M. had only found it necessary to administer three of the powders, but the camphorated mixture had been given regularly. The child had improved in every respect, and mild nutritious diet was substituted for the medicines.

Case 10—July 29.—G. W. had luxuriated on the vegetables now so common and so cheap, and despised the restrictions of the Profession in regard to them. After a hearty dinner, of which green peas and cucumbers formed a large portion, assisted by a tumbler or two of beer, he found that the diarrhoea, which had given him no uneasiness for the preceding two or three days, became suddenly aggravated, with considerable griping and nausea. He tried to allay the symptoms by burnt brandy. About 7, p.m., vomiting commenced, and the stools became more watery; and alarmed by a cramped feeling in his legs, he sent for me, and I saw him about 8½ o'clock. The symptoms had rapidly progressed since he sent off his messenger. The skin of his arms, legs, and face, was blue, and covered with a cold, clammy perspiration; voice whispering, tinnitus aurium, severe cramps in the lower extremities, and occasionally in the arms and fingers, griping in the bowels, which were opened every 15 minutes—the stools presenting a rice-water character; tongue cold to the touch; incessant retching, but bringing up nothing.

Pulse small and thready, countenance sunk, and the whole appearance indicative of decided collapse. The same line of treatment was pursued as in the other cases; the irritability of the stomach quickly subsided. In the course of about six or seven hours, he passed a bilious evacuation, the pulse rose, and reaction set in. This case also recovered.

In the details of the cases, I have sought as much as possible conciseness; my intention having been rather to illustrate the treatment adopted, and to point out the stage of the disease at which it commenced, than to give a long history of symptoms, which in the present disease do not vary essentially in the different cases. I have only incidentally alluded to the collateral external means employed; these consisted in the free use of sinapisms to the spine and epigastrium, and hot applications of various kinds to the extremities, with the internal exhibition of stimulants, of which camphor and sulphuric ether occupied a prominent place.

It has been not unaptly remarked of Asiatic Cholera, that "it is a disease which begins where all other diseases end—in death;" and numberless cases are to be met with, in which the shock to the nervous system is of such a powerfully depressing nature, as to place the absorbent system at once beyond the pale of any influence. Such cases could not be benefitted by any treatment, however judiciously or assiduously applied; but if, on the contrary, the vitality of the system is not at once paralysed, if the absorbents can act, no matter to how trifling soever an extent, the fairest prospect is afforded to us, through calomel, of rescuing the patient from an otherwise imminent death. The Calomel treatment has then something more than a mere claim on us, on the grounds of theory; its practical employment has proved as signally successful in the hands of other medical gentlemen in this city, as it has done in mine.

Montreal, July 30, 1849.

#### ART. XVII.—THE APPEARANCE OF THE CHOLERA IN KINGSTON.

By HORATIO YATES, M. D.

I am sorry that I did not receive your letter of the 18th till this morning, too late to answer as early as you desired. Below you will find the result of the minute inquiries that I have made concerning the progress of Cholera in our town this year.

Five cases occurred on the 30th April and the 1st and 2nd May; of these, three died; all but one were of intemperate habits, and that (temperate) one died. The treatment of the second that recovered was—sm-



monia; blisters to the belly; calomel and morphia, with æther, camphor and brandy, with effervescing draughts, iced, *ad libitum*; heat to the extremities, &c.; the three fatal cases were dying when first seen.

There were no other cases till the 28th May, and from that date to the 4th June were 17 cases, 15 of which proved fatal; 13 of these occurred in a very filthy Suburb, Lot 24; in fact nearly all the cases have occurred in this locality, and the victims have generally been drunkards. The cases which occurred in town were similarly circumstanced, *i.e.*, drunken denizens of filthy courts or yards.

In addition to the cases reported, there have been many that *appeared* to be incipient, but which yielded speedily to treatment.

Dr. Bell's treatment (described in Braithwaite) seems to have been most successful. I tried it in six cases in the penitentiary, two of which died and four recovered. (I bled all the six and gave quinine and iron, also blistered the abdomen,) but I think if I had bled sooner the two that died, they *might* have recovered; however, after squeezing out eight or ten ounces of "*black current jelly*" from a vein in the arm, and giving a dose of quin. and sulph. ferri, every 20 minutes, reaction soon came on, and they lived, I believe, much longer than they otherwise would have done. The vomiting and purging seem to have stopped in every case where this dose had been repeated six or eight times.

Brandy and opium have given no satisfaction. Iced soda water, great satisfaction. Bleeding at the commencement of the stage of collapse, I have great faith in.

I have given the *sulphur and charcoal* in three cases of complete collapse—reaction came on in all, (but other means were also used) but they all died.

In short, from the experience of the cases which have fallen to me and others, we are completely in the dark, as to the proper mode of treatment; it is all empirical. Dr. Bell's (of Manchester) theory seems very plausible.

Cases of Cholera in the town and neighborhood of Kingston—1849:

From 30th April to 2nd May.....	5 cases.....	3 fatal.
“ 28th May to 4th June.....	17 “.....	15 “
“ 5th June to 13th June.....	8 “.....	5 “
“ 14th June to 28th June.....	10 “.....	5 “
.....	—	—
Total.....	40 “.....	28 “

In the Provincial Penitentiary from  
28th May to 6th June..... 8 “ ..... 4 “

Its entrance into the Penitentiary I cannot account for, except that the air of the wings has been confined and

poisonous—for 200 men are confined in a wing which was not ventilated properly; and on walking through it in the night the effluvia was intolerable. Means (I hope efficient) have now been adopted to prevent a recurrence, and no fresh case has occurred since 6th June. Dr. Sampson has just now resumed the duties of Surgeon to the prison, after an absence of just a year.

Kingston, June 28, 1849.

ART. XVIII.—PREPARATIONS OF IRON IN CHOLERA

By THOMAS REYNOLDS, M.D., Brockville.

In times like the present, when the newspapers and periodicals of the day are teeming with nostrums and specifics for Cholera, it is perhaps trespassing too far upon your space to add another to the list of recipes before the public; I do so, however, from having observed that a great deal of disinterested philanthropy has been attributed to a medical gentleman in Quebec, for having made known, in rather a boastful way, that he had cured ninety-nine cases out of a hundred, by the use of a preparation of iron, (the *Tr. fer. mur.* in combination with *ol. anisi.*) It is true that medical men are occasionally mercenary enough to speculate upon the credulous public, who are always so ready to purchase specifics when an epidemic prevails, or is expected; but how few men of standing in their profession are those, who would stoop to such means of trumpeting forth their fame to the world, or, what is after all the ruling passion of the age, lining their coffers with money!

I am happy to say there are few medical men of any eminence who would hesitate to give their brethren of the profession the benefit of their experience, or refuse to respond to a call upon them by the public, during the prevalence of a scourge like the one with which so many places are afflicted.

I have for some months past directed my attention to various preparations of iron, the *tr. mur. ferri* among the number, to check the diarrhœa which precedes the common cholera of the country, and have found a preparation of the permanganate preferable to all others. In no instance have I found it to fail to check the first onset of diarrhœa; and in many severe cases where the disease had made considerable progress, I have easily controlled its advance by the administration of a few doses of the preparation. It is frequently necessary to remove some obstruction of deficient secretion, by the use of a dose of calomel or castor oil; of course the practitioner must be guided by the circumstances of the particular case.

Mr. Kerr of Dublin, some years ago, recommended

a preparation of the per nitrate, made by acting upon iron by dilute nitric acid, till a saturated solution was obtained, then adding a small quantity of hydrochloric acid to prevent decomposition. Notwithstanding this addition, a deposit generally takes place of the sesquioxide, which of course is an objection to his preparation.

Mr. Duhamil found that the magnetic oxide was changed into the state of sesquioxide, (see Am. Journ. of Pharm., vol. xvii, 1,) and he recommended the addition of a quantity of sugar instead of the hydrochloric acid, to prevent this contingency. His formula appears to be a valuable one, and is as follows:—Take of iron wire free from rust, and cut in several pieces 6 drachms; nitric acid, 1½ fluid ounces; water, 8 fluid ounces; sugar, 14 ounces; dissolve the iron to saturation in the dilute acid, by allowing them to stand 12 hours, with occasional agitation; filter and add the sugar which is dissolved by a gentle heat, and the solution filtered if necessary. One reason for preferring this preparation is, that the iron is here in the state of magnetic oxide, and it has been everywhere observed during the prevalence of cholera, that the atmosphere is singularly deficient in electricity; it is worthy of attention, the employment of agents likely to supply electricity, or its closely allied agent magnetism. To each ounce of the above syrup I add of tinct. opii ʒi. sp. camphor gr. xxx; or where there is much pain, of the tinct. capsic ʒi. to the ounce of syrup. The dose of the mixture, 16 to 20 drops in a little water, repeated every hour till relief is obtained; should there be much pain or prostration, the dose to be administered in a little burnt brandy.

I should be glad to hear that this preparation has been made successful trial of, as it has in my hands proved a valuable auxiliary in the treatment of a very troublesome, and often alarming class of complaints with which we are every summer more or less visited.

Brockville, July 26, 1849.

## PRACTICE OF MEDICINE AND PATHOLOGY.

### ON CHOLERA.

(From *Braithwaite's Retrospect of Medicine, Continued.*)

(Continued from page 71.)

J. C. ATKINSON, Esq. :—

I am desirous at the present moment of directing the attention of your numerous scientific readers to a very interesting phenomenon, more or less present in the collapse stage of cholera, which seems to have hitherto escaped the observation of medical men—viz., animal electricity, or phosphorescence of the human body. My attention was first attracted to the subject during the former visitation of that fearful disease in the metropolis. It was indeed singular to notice the quantity of electric fluid which continually discharged itself on the approach of any conducting body to the surface of the skin of a patient laboring under the collapse stage, more particularly if the patient had been previously enveloped in blankets; streams of electricity, many averaging one inch and a

half in length, could be readily conducted by the knuckle of the hand when directed to any part of the body, and these appeared, in color, effect, crackling noise, and luminous character, similar to that which we are all accustomed to observe when touching a charged Leyden jar. I may remark the coincidence, that simultaneously with the heat of the body passing off, the electricity was evolved; and I am therefore led to ask the question—Are not heat, electric and galvanic fluids one and the same thing? Does not the fact of the passing off of both imponderable substances at one and the same time strengthen this conclusion?

Again: are not the whole of what we call *vital* phenomena produced by certain modifications of the electric-galvanic-magnetic matter and motions? and do we not find that these *vital* phenomena are continuously affected by the relative state of the surrounding electric medium? To what can we attribute the present fluctuating condition of the barometer, if not to it?

We know what wonderful *decomposing* action galvanism had on alkalies, under the hands of the illustrious Humphry Davy; but we do not know, nor have we any conception in the present state of knowledge, of the *decomposing* action of the electric matter of the atmospheric air, in various conditions, on the fluids generally of the animal body. Chemistry has failed in pointing out any ponderable material as the exciting cause of epidemic diseases.

In the treatment of cholera all are agreed that *non-conducting* substances on the surface of the skin aid essentially the cure; and during the disturbed state of the atmosphere, for the purpose of retaining the electricity continually eliminating in the system, we are told to wear woollen bandages, flannel, and gutta percha soles, so as to insulate as much as possible the body, to prevent the heat—the electric fluid—from passing off.—*Lancet*, Nov. 4, 1848, p. 504.

SIR JAMES MURRAY :—

Says, "From the theory of cholera published in the *London Medical and Surgical Journal* 1832, and since amply confirmed in many parts of the world, it is to be concluded that the judicious use of long continued *galvanic passes* through the *respiratory* and *spinal nerves* is one of the most essential adjuvants that can be employed during collapse, or in that state of passive galvanic abstraction which ought to be treated like suspended animation."—*Lancet*, Nov. 4, 1848, p. 501.

DR. JOSEPH AYRE, of Hull :—

[Recommends the use of calomel in cholera, having tried it largely and with great success in the epidemic of 1831 and 1832. He says :]

Calomel in one or two grain doses, taken with one or two drops of laudanum, and repeated every five or ten minutes, for several successive hours, with an occasional omission of the laudanum at intervals, formed my exclusive remedy for the blue or collapsed stage in all the cases I attended. I scarcely used a single auxiliary means of any kind. I neither bled, nor gave stimulants, nor emetics, nor used the air-baths, nor frictions, except to relieve the cramps, nor did I resort to any but the ordinary means for supporting the temperature or strength of the system. I gave only calomel, and in the dose and manner described, and placed no other limit to the use of it than that which was placed by the disease. So long as the disease in the collapsed stage continued, the medicine was continued; for pending the duration of that stage, I desire emphatically to aver, no absorption of the calomel takes place, and no pyalism can occur; and when that stage was yielding to the remedy, I took the needful care to suspend the use of it. Of the patients whom I lost, the greater number died in the stage of collapse, and within from twelve to twenty-four hours from my first seeing them; and nearly all, if not all, from causes which were superadded to the disease, and which, in most instances, might have been obviated by a more exact attention of the friends and attendants to their duty. Few, therefore, died in the consecutive fever, and of those who recovered, not one in ten had any fever at all; for it is one of the essential and distinguishing properties of this treatment, to prevent the occurrence of the consecutive fever, by its direct power to restore the secretion of the liver, which is alone required to put an end to the disease. I have already stated, that notwithstanding the very large quantities of calomel that are often needed, and taken in single grain doses, ere the collapse is subdued, no pyalism or other inconvenient

effect is ordinarily produced by it. Not one in twenty of my patients had any pyalism at all; nor in the very few who had it, did it last much more than a week, and not in any of them was there a vestige of it at the end of a fortnight. Indeed, after taking some pains to call to my recollection the number of such patients, I can only count up seven who could be said to make any complaint of it, and with those whose lives had been saved by it, it passed away entirely in ten or twelve days, and without producing, or leaving behind it, even the shadow of a shade of those effects which some might imagine to be inevitable, and in its anticipation bewail with profitless lamentation. In the way already described, I gave it alike to infants, though in a smaller dose, and to the aged, and in one instance, to a considerable extent to a woman ninety-two years of age, whom I found in the collapse stage, and nearly pulseless, who in a few days was wholly recovered, and who survived the attack no less than eleven years, having reached the advanced age of one hundred and three, and with a power to take out-door exercise up to a period very near her death.

In some cases it was taken in quantities the most considerable, and which nothing but the imminence of the danger from the disease, and the experience of its harmlessness could justify. By one man, Vaughan, a tramp, who was admitted into the hospital in the stage of collapse in its most malignant form, and who only emerged from it slowly at the end of three days, the immense quantity of five hundred and eighty grains of calomel was taken, and who, notwithstanding, without either fever or pyalism following, was perfectly well, and ready to leave us in a week.—*Lancet*, Oct. 23, 1848, p. 472.

DR. C. PATTERSON:—

[No remedy except calomel, Dr. P. thinks, can be relied on in cholera, when once the stools have assumed the rice-water character; the only difficulty is that its action is not immediate; and some remedy is therefore needed to delay the progress of the complaint until the calomel becomes absorbed. Such a one Dr. Patterson thinks he has met with. He says: ]

Among the various remedies hastily tried, and as hastily abandoned, during the prevalence of cholera in 1831 and 1832, were stimulant and astringent enemata. One of these was composed of sulphate of copper, sulphate of zinc, and alum; one scruple of each dissolved in two ounces of cold water. It is evident that this was not employed with any successful effect; for it was scarcely suggested, when it fell into disuse, and was forgotten, no mention of it having ever been made by any of the numerous writers who since have written on cholera. I was led to employ it late in the epidemic, which abated before I had time for sufficient experience: but what I saw left a deep impression on my mind, that it possessed considerable, though temporary, power in immediately restraining the alvine discharges, and was just the adjuvant that was wanted to render the calomel treatment effectual.

[Accordingly in the second epidemic which attacked Rathkeale in 1833, this plan was tried, and the mortality *post hoc*, whether *propter hoc* or not, was very low. Dr. Patterson tells us: ]

From the very onset, and in the first case that presented itself, that treatment consisted in the carrying out of the views I have already stated. I combined the employment of calomel, for the purpose of expelling the poison from the system, with the administration of the compound sulphate injection above described, for the purpose of restraining the discharges until the calomel should have time to act: and I proceeded thus—When a patient, passing dejections resembling rice-water, presented himself, I at once placed on his tongue five grains of calomel, and gave thirty drops of tincture of opium; and then, without a moment's delay, a nurse-tender who accompanied me, threw a wineglassful of the compound sulphate enema solution into the rectum: generally the injection was immediately returned with a large discharge of watery liquid, the contents of the rectum. The nurse, then, being instructed, without a moment's delay, threw up a second similar injection, which was, in most cases, retained by an effort of the patient's for a few minutes, and then came away, accompanied by a few ounces of the watery discharge. The nurse, then, instantly again repeated the injection, which, being within a few minutes, returned without any addition, she ceased to throw up any more.

At my next visit, I was in most cases met with the complaint, that the patient was extremely bad—"worse and worse," "going

(or rather running) to the vessel every minute:" but on further inquiry, this running to the vessel always turned out to be nothing more than a troublesome tenesmus. The watery discharge was completely arrested, and the patient was not passing a particle of even liquid feculent matter. He was told that this state was what was desired, and was encouraged to bear with it.

The tenesmus generally continued for a few hours, and then gradually abated, and in the great majority of cases there was no return of the watery discharge; while at the end of every four hours five grains of calomel were regularly placed on the tongue, until after three or four, or perhaps six or eight, such doses, the patient had a semi-consistent, dark green, or black biliary motion, followed by others of a similar nature. These stools presenting no curdy appearance, as of a watery liquid separating from a thicker biliary matter, left no doubt that the cholera state was at an end. The calomel was then discontinued whether the gums had become sore or not, and thenceforward, under the usual management, every such case in this visitation of the epidemic did well.

Most frequently no attention was paid to the tenesmus to abate it: for, as I have said, it was regarded as a favorable state; but sometimes the suffering of the patient from that cause would be very distressing. Then, after a reasonable delay, that it might not be abated too soon, a starch enema with laudanum was administered, and always produced relief.

In some cases, the tenesmus and arrest of the watery discharge immediately followed the first injection, and no second one was required.

It often happened that after two, or three, or more hours, the tenesmus would go off, and there would then be a watery motion, when immediately a compound sulphate injection would be again thrown up, and from time to time repeated instantly, as often as there was any return of the watery character; but this repetition was hardly ever required more than three or four times.

It sometimes occurred that the compound sulphate injection produced no tenesmus, and yet was followed by complete arrest of the cholera discharge, and there were instances in which the injection, even the first, was retained in the rectum. In these latter cases, after waiting from half an hour to an hour, I caused, lest any harm should arise from absorption of the copper, a large enema of warm water to be given. This always cleared out the bowels, and the case went on well.

There is an affection which was sometimes met in both cholera years, and which I believe has been generally regarded as fatal in its result. This is a discharge of pure blood, or bloody watery liquid, from the rectum, but it may be easily and effectually restrained by injections of solution of alum. Each injection should consist of three drachms of alum dissolved in half a pint of cold water. As fast as one injection comes away, while there is any appearance of blood, another must instantaneously be given. The nurse should be supplied with two or three pints of the solution, and the necessity impressed upon her of carefully watching the patient, and instantly administering an injection as soon and as often as it may be required. When the sanguineous discharge is thus suppressed it seldom returns; but if it should, recourse must again be had to the alum injections. I have never known them to fail in stopping the discharge, and when given in time, saving the patient.

In the bilious or feculent diarrhœa which so frequently occurs as a precursor and concomitant of cholera, I have not employed the compound sulphate injection. In these cases I have been content with using the remedies usually recommended, but the moment the stools assumed the rice-water character, I at once had recourse to the injection.

In employing this injection, it will not do to direct it to be given at prescribed intervals. It must be fearlessly and steadily repeated instantly after every motion exhibiting the watery character, no matter how numerous or frequent may be the calls for it. It is on this its success depends, and if there be neglect of observing this, nothing but failure of this powerful remedy in the hands of those who may so negligently employ it is to be expected.

In visiting the patients at their houses during the second epidemic, I had the assistance of Mr. O'Hanlon, a respectable apothecary of this town, who was very conversant with cholera, and who always accompanied me and witnessed the result of the treatment.

It should always be an injunction to the patient to retain the injection for a few minutes if possible. When given to children

it was always diluted with an equal proportion of water.—*Dublin Medical Press*, Sept. 30, 1848, p. 177.

G. J. GUTHRIE, Esq. :—

[A remedy supposed to be specific, has been employed for cholera, in the Russian army in the Caucasus. The authenticity of the documents from which the account of this plan of treatment is derived, is vouched for by Mr. Guthrie. This gentleman, in bringing the subject before the Medico-Botanical Society said : ]

This remedy was a singular one: it was naphtha, exhibited in small doses of from ten to twenty drops; the dose being repeated if required, which was rarely the case. The naphtha that was used was not the ordinary naphtha of the shops, nor that recommended in the treatment of rheumatism and consumption; not the petroleum or Barbadoes tar, but a pure white or rose-colored naphtha, which is employed without being subjected to distillation. It is in all probability the mineral naphtha which is obtained from Beku, on the borders of the Caspian. In order, however, to determine precisely the characters and properties of this mineral, he (Mr. Guthrie) had sent to Circassia to procure a bottle of it, and as soon as it arrived it should be placed in the hands of their secretary.

Mr. Guthrie then read extracts from letters from Dr. Andreyeoski and Prince Woronzow, the Russian Commander-in-Chief in Circassia.

Dr. Andreyeoski says, "naphtha or petroleum, not distilled—and the white is to be preferred,—is an infallible remedy against the diarrhœa cholericæ, which prevails during certain seasons, in the dose of from four to eight drops, in a little brandy, white-wine, or mint-tea, taken cold: a single dose usually suffices to arrest the complaint. The evacuations, which, in this species of diarrhœa, are always liquid and glairy, become more solid, and less frequent. Sometimes the dose requires repetition at the end of two or three days. The diet should not be too strictly, although carefully regulated. In completely developed cholera of a deadly nature, the cures are not so constant, and from fifteen to twenty drops of the naphtha are to be given for a dose. If they are vomited up, the dose should be repeated: a second is rarely required if the first be retained. It acts evidently on the skin, and on the kidneys, and removes the cramps."

In the first letter from Prince Woronzow, dated Tiflis, March 1, 1848, it is stated that "it is indisputable that most cholera cases begin with diarrhœa, and consequently it is most important to act immediately and energetically against the first symptoms; the experience of the last year has proved without a doubt that naphtha is the best and easiest remedy in diarrhœa, whether it be nothing but diarrhœa, or the first symptoms of ensuing cholera. Dr. Andreyeoski thinks that the diarrhœa which precedes cholera is always without pain; and it is then that naphtha should immediately be resorted to; but in diarrhœa, with pain in the bowels, he always employs opium. He first met the cholera last year at Tarnikhan, where it prevailed to a very serious degree; the hospital I visited contained the first day more than 200 patients; the cases generally were very bad, and the mortality great. On inquiring of the colonel commanding the Cossacks, why there were so few Cossacks among the sick, he told us that he made light of cholera, because they employed the elixir of Woroneje, which proved successful in every case. Andreyeoski immediately procured the recipe for the elixir, and on the first appearance of cholera in the convoy which accompanied me to the camp, he tried drops of that elixir, with constant success. On examining that prescription, he found it to be a singular mixture of different matters, looking very like a quack medicine, but containing among other strange, and, as he thought, useless substances, some specific acting favorably in cholera; and he told me that naphtha, one of the principal ingredients, might possibly be that specific. The stock of elixir being soon exhausted Dr. Andreyeoski determined to try naphtha alone, and, as he expected, it succeeded even in severe cases, but in mere diarrhœa the success was immediate. He has, however, always resorted to the elixir, in cases to which he was apparently called too late,—in the blue stage, accompanied by cramps, &c.; but even in many of these advanced cases naphtha alone has proved successful. I have seen several of our officers quite blue, and in extreme suffering, who were cured by it. As to simple diarrhœa, during the existence of cholera, I do not know a single case which the naphtha failed to cure, when resorted to immediately." One of the

Circassian chiefs was suddenly seized with cholera; before Dr. Andreyeoski could see him, he had been bled, and was in the last stage of the disease; he was ordered some rum, and had two doses of the elixir, which, with friction and warm clothing, restored him to life and health, but the convalescence was tedious. The naphtha must be the genuine white or rose-colored, not black nor brown, nor distilled, as that would be much too powerful.

Extract from a letter from Prince Woronzow, 20th April, 1848. "In sending you the promised prescription for Dr. Andreyeoski's elixir, I must add that he recommends frictions of every part of the body during a real attack of cholera, besides the use of the elixir, and warm baths also to alleviate the cramps. It must be remembered that in almost all cases the real symptoms of cholera are preceded by diarrhœa without pain, to check which the naphtha drops have been without comparison the most successful remedy. If cholera appear abruptly, Dr. A. advises the immediate use of the elixir; if this be not within reach, then resort to the naphtha drops, as well as the warm baths, and especially to vigorous friction, to restore the circulation. Dr. A. deprecates all bleeding and mercurial medicines: if diarrhœa with pain occur, even in cholera times, Dr. A. treats it simply with opium, not considering it premonitory of cholera."

The following is the formula for the elixir of Woroneje:—Sp. vini rect. lb viiss; sal. ammoniac. ʒ j; nitri depurati, ʒ j, gr. xv; piperis, ʒ j, gr. xv; aquæ rogiæ, ʒ ss.; acet. vini. lb iss.; petrolei (naphthæ), ʒ ss.; ol. olivæ, ʒ ss.; ol. menth. pip. ʒ vij.—Digere per horas xii. et cola; capiat coch. ij., parv. pro dosi omni quarta parte horæ.—*Medical Gazette*, June 23, 1848, p. 1089.

J. C. ATKINSON, Esq. :—

[The cases in which this remedy is applicable, are stated by Mr. Atkinson to be those in which great flatulence and unpleasant eructations occur. He says:]

The material is named naphthaline, (and seems an essential constituent of naphtha); it can be procured from Mr. Hooper, of Pall Mall East, and doubtless elsewhere. It is pronounced the purest hydro-carbon, and most readily absorbs gaseous products, and putrescent materials of the intestines, relieving almost instantly the tympanitic condition of the bowels, so often present in that disease. This crystalline substance may be given in pills, in one or two grain doses, with opium, or aromatic confection; the latter, for the purpose of removing in part the unpleasant odour which seems peculiar to it.

I offer this remedy for trial, more particularly at the present moment, as carbon has been strongly recommended by Dr. Parkin; and as this is the purest hydro-carbon that we have, and again, because, naphtha, (not the medicinal naphtha, which after all appears to be only acetone,) has received some reputation for the cure of that formidable disease on the borders of the Caspian Sea.—*Lancet*, Aug. 19, 1848, p. 220.

DR. J. TUNSTALL, Bath :—

[In reference to the use of petroleum, Dr. Tunstall, of Bath, states that in September, 1846, he wrote a letter to Sir C. Napier, which was extensively circulated in the East by Sir Charles's direction, and from which the following is an extract.]

The petroleum is a natural product found in many parts of the East Indies, in Persia, and in the island of Barbadoes, in various states of purity. A drachm contains fifty-two grains of pure carbon, with eight of hydrogen; whilst an equal quantity of any other substance, which could be safely administered, contains but five grains of that elementary body.

Pure petroleum is the only known substance which contains carbon and hydrogen, without the admixture of any other elementary principle, which is not the case with the other bituminous products; its peculiar efficacy depends on this binary combination, its curative powers resulting from the chemical union with those principles on which the morbid action depends, by its elements entering into new arrangements with the elementary gases eliminated by disease.

It is a mild though effective stimulant, anti-spasmodic and anti-septic, acting in the same manner on the absorbent vessels as mercury, without its deleterious effects; it speedily permeates the whole system, so that its odour is perceptible in all the animal excretions. Asiatic cholera is a disease requiring (as I can testify from my own experience in London and Edinburgh,) the most

active diffusible stimulants to support the flagging energies of life; it is also a disease attended with an alteration and decomposition of the vital fluids. The observations of the celebrated Dr. John Davy, and of other eminent practitioners, have demonstrated that the expired air of cholera patients contains a much smaller proportion of carbon (that element which is discharged from the system during healthy expiration,) than is sufficient for the proper purification of the blood.

Now, in the petroleum, we have a medicine that acts primarily as a powerful stimulant, secondarily by supplying the system with its due proportion of carbon for excretion; while its effects being produced by means of the absorbent system, it acts beneficially as an antiseptic, preserving the frame from the rapidly fatal effects of this horrible disease by evolving carbonic acid from the lungs.

I have seen the petroleum used extensively, both locally and generally, and have never observed the slightest deleterious effects arise from its exhibition, even in comparatively large doses. I am induced to believe, from actual observation, that it is a most valuable diffusible stimulant, and that were it freely employed in the Asiatic cholera, it would produce marked beneficial effects.

To you, then, Sir, I would address those observations, which would more properly be addressed to the medical officers under your command; hoping, that by your kind recommendation, they may be induced to give this medicine a fair trial.

The petroleum used in England is the petroleum (*Barbadense*), which contains, according to Dr. Ure and Professor Faraday's analyses, in 100 parts, 85·5 of carbon, and 14·5 of hydrogen, and by the latter it is called hydro-carbon.

It is important to guard against the employment of petroleum or natural naphtha, containing any other elementary body than the two before mentioned. To prevent any error in this respect, perhaps it is necessary to state that the petroleum (*Barbadense*) employed by practitioners in England, is a pure hydro-carbon; it will, therefore, be necessary carefully to analyse the native East India naphtha before it can be safely administered.

The form of exhibition I would recommend is the following:—Take the yoke of one egg, and amalgamate with it a tablespoonful of the petroleum, and to it add forty drops of the aromatic spirits of ammonia, filling a wine-glass with equal quantities of brandy and water; and this dose may be repeated according to the emergency of the case.—*Provincial Medical and Surgical Journal*, July 12, 1848, p. 390.

Mr. JOHN MOORE, of Bourton, Gloucestershire:—

[Recommends the use of turpentine on the following grounds:]

The most formidable symptom of cholera—that which most rapidly tends to produce fatal prostration—is the escape of the serum and saline particles of the blood from the internal surface of the intestines. Over this symptom turpentine exercises a manifestly powerful influence. Like another correspondent of the *Lancet*, (26th August last,) I was led to administer turpentine internally in cholera by witnessing the salutary effects resulting from its external application, which by far exceeded what could be fairly attributed to counter-irritation; but though I have as yet prescribed it empirically, reason and analogy are not wanting to account for its efficacy.

Without speculating upon their nature and position, (which would be foreign to my purpose,) I apprehend that there can be no doubt that orifices naturally exist upon the internal surface of the intestines, through which serous exudation takes place. Internal hemorrhage may occur where no suspicion of organic lesion exists. In cholera, the albuminous and saline particles of the blood pass away copiously by the bowels, and no abrasion of their surface has been discovered upon *post mortem* examination. It is a fair assumption therefore, that by the same orifices which in their normal state instil serum into the intestinal canal, for the purpose of its lubrication, grosser particles of the blood may pass when the said orifices are relaxed by the depressing agency of the choleraic or other poisons. Then, as turpentine exercises over passive hemorrhages an influence almost specific, analogical reasoning might lead us to anticipate its tending to mitigate or arrest that exhausting effusion by the bowels of the nutrient portions of the blood which occurs in cholera.—*Lancet*, Oct. 28, 1848, p. 478.

Dr. C. RADCLIFFE HALL:—

[The treatment by tartar emetic which originated in Italy, was noticed in the *Medico-Chirurgical Review*, and came under the

notice of Mr. Stott, of Manchester, by whom, and by others at his suggestion, it was extensively used in 1832. Dr. Hall, who observed Mr. Hott's practice, states that it was very efficacious. He says:]

The ordinary mode of proceeding was as follows:—Five grains of tartarized antimony were dissolved in half a pint of camphor mixture, of this an ounce was given every two hours. The patient was urged to drink freely of toast-water. Immediately, or in a short time after the first dose, vomiting occurred, and was encouraged by the toast-water. After a time, the patient usually objected to the copious drinking of the water, and required much urging to persevere. Perseverance, however, was strongly enjoined. It was noticed in nearly all the fatal cases, that the objection to continued drinking had not been overcome. This plan was unceasingly persevered with, presenting a scene of incessant drinking and throwing up, until the stomach became tolerant of both the antimony and the fluid. The mixture was then continued, with less drinking of toast-water, so long as the symptoms required it. Simultaneously with, or shortly after the cessation of vomiting, the symptoms usually improved. The good signs were these—warmth of tongue; gentle warm perspiration, and secretion of urine; increased volume of pulse, subsidence of cramps and of diarrhoea, and less of the extreme dejection of mind: sometimes, a little bile in the matter vomited, or a bilious stool. The antimony was now discontinued, the patient allowed to remain quiet, warmth applied to the feet, and a little arrow-root gruel given, flavored or not with brandy, according to circumstances. The patient generally fell into a quiet sleep, and awoke feeble, but feeling comparatively well and in good spirits. The action of the bowels was next attended to by giving castor oil, and very little other than hygienic treatment was needed subsequently. When the cramps attacked the abdomen, sinapiams were applied until the effect of the antimony had had time to remove them.

The advantages of this treatment were found to be 1, its superior efficacy as a means of cure; 2, its speedier operation in curing; 3, the absence of the fever of reaction, with its accompanying risk of pneumonia and other serious lesions—a result not ordinarily attending any of the other methods of treatment.

The rationale of this treatment—homœopathic in theory, heroic in practice—is easily deduced from the known pathology of cholera. All we know of the facts of cholera is summed up in few words. After exposure to the influence, the subject sickens, there is extreme prostration of mind and body, shock of all parts of the system, a check to all natural secretion, inability on the part of the vascular organs to circulate the blood properly, want of blood on the surface, superabundance of blood in the viscera, a gorged state of the internal veins, effusion of the serous part of the blood through the gastro-intestinal mucous membrane, and, consequently, serous vomiting and purging, deficient animal heat, and cramps. What, then, are the indications?

1. To restore the circulation by dislodging the gorged internal vessels of their contents, by sending blood to the surface, and so to gain time.
2. To follow Nature's indication of ejecting the *materies morbi*, without allowing death to ensue in the meantime; or otherwise to follow, to a safe extent. Nature's own plan of action, until the morbid agency ceases to exercise its deleterious influence.
3. To restore fluid to the drained and inspissated blood.
4. To restore secretion.

Theoretically, we might have doubted the safety of exhibiting a prostrating remedy like tartar emetic in a disease attended with prostration, like cholera. On such a principle we should not bleed in peritonitis. But the prostration of cholera is kept up by the almost stagnant circulation in the capillaries, and the engorgement of the veins, conditions which antimony, when absorbed, has a tendency to obviate, and which, as an emetic, both mechanically and through the ganglionic nerves, it tends to overcome. The distinction between spontaneous vomiting and vomiting artificially induced must be borne in mind. The former exhausts far more rapidly and seriously than the latter. Tartar emetic never kills by vomiting. However, the discussion of the principle of administration is of very secondary importance to the practice, and it is on practical, and not on theoretical grounds, that I suggest a trial of the plan, should the expected opportunity occur.

It is well to bear in mind the points we *do not know* in the pathology of Algid cholera.

1. The nature of the morbid poison, whether electric, animalcular, malarial, or animal.

2. The laws of its transmission, whether as an epidemic only, or as an epidemic and infectious disease also.

3. The laws of its operation, whether imbibed into the blood through the respiratory and vascular mucous tract generally, or through the skin, or whether it act in some indescribable manner on the nervous system without necessarily being received into the blood at all. Assuming its reception into the circulation in the first instance—whether it merely mixes with the blood and suspends secretion and muscular power by its own action on secreting cells and muscular fibre, and nervous power by a similar action on nerve-cells; or affects secreting and muscular tissues only through the medium and intervention of the nervous system to which its direct influence, whilst circulating in the capillaries, is restricted; whether it changes the quality of the blood like the typhoid poison prior to acting on the solids at all, or whether it performs all these actions at one and the same time.

Whether the blood or the nervous centres take the lead in causing the phenomena,—whether the vitiated blood stops secretion, disorders the nerves, and irritates the muscles, or the checked secretion causes the accumulation of vitiating matter in the blood,—whether the serous discharge be a morbid secretion set up for the ejection of the morbid poison, or a mere transudation of the thinner parts of the blood from the distended portal venous system,—in practice we sorely require the information to guide us. We have vitiated blood, internal congestion, torpid nervous energy, feeble heart, checked secretions, and exhausting discharge, to contend with, whatever their mode or sequence of causation.

Many practitioners are sarcastic at the expense of the prescriber of "hot and cold in the same breath," and criticise numerically such a combination as that of ipecacuanha and dilute sulphuric acid. It may be worth considering notwithstanding, whether in cases of cholera attended with extreme collapse and want of pulse, the antimonial treatment might not advantageously be conjoined with the exhibition of ammonia, ether, brandy, or capsicum, the hot-air bath, or other internal or external excitant, with chlorate of potash, or some other saline, or with the copious exhibition of whey, instead of toast-water, in the hope that any such animal fluid absorbed might better supply the fluid and the salts which the blood has lost.—*Lancet*, Sept. 16, 1848, p. 312.

DR. GAVIN MILROY :—

[Almost all the best practical writers since the days of Sydenham, have recommended that the vomiting should be at first encouraged by the use of mild diluents; but this has been chiefly with a view to the expulsion of offending matters. Dr. Milroy observes :]

Obstinate and protracted vomiting will not infrequently yield to a full dose of ipecacuan, after opium, creosote, effervescing draughts, &c., have been ineffectually tried. In other cases, I have found it to be best relieved by the administration of a purgative enema; the forced action of the bowels downwards suspending the inverted action of the stomach and duodenum, and thus affording us the counterpart to the arrest of a diarrhoea by the operation of an emetic. In both cases, the simultaneous use of an irritating epithem to the abdomen will prove a powerful adjuvant.

I would remark, that the medical practitioner will find it most useful, in every severe case of cholera, to superintend the action of the emetic himself; and, in a season like the present, it will save much time for him to carry some tartrate of antimony, or, what is better, ipecacuan powder, in his pocket; a small phial of sal volatile also will be found very serviceable. Of course, the patient should always be in bed at the time: indeed, this remark is of universal application, as respects the use of emetics; otherwise, some of the most salutary after-effects of the vomiting will be altogether lost.—*Medical Gazette*, Oct. 27, 1848, p. 717.

MR. T. F. BAKER :—

[At a meeting of the London Medical Society.]

Mr. Baker (Bengal Establishment) said—It is now thirty years since I first saw the disorder. The treatment then strongly

recommended was, scruple doses of calomel, with half a drachm or a drachm of laudanum, in peppermint water. This treatment was often successful when the disease had assumed a milder form, but was very far from succeeding when it first broke out, and the patients would die in two, three, or four hours. We were not confident in any mode of treatment, but I think the most successful was an emetic in the first instance, which induced full vomiting, quite different from the spasmodic action caused by the disorder; afterwards, five grain doses of antimony, with or without calomel; bleeding; mild purgatives; flannel rollers to the extremities; lemonade, tea, plain water, or soda water. Full vomiting by emetics will often excite reaction, which seems the chief indication in our treatment. Bleeding diminishes the blood in the veins, and we find the venæ cavæ gorged with blood; the heart beats quick, weak, and indistinct; the breath is quite cold, for the blood does not circulate in the lungs. The tight flannel rollers relieve the painful spasms; they do not stop the circulation in the arteries, but may retard the flow of blood to the venæ cavæ, which we always find gorged. I much question the use of stimulants at any period of the disorder, though I have seldom seen marks of inflammation in the stomach where they have been given. There are often ecchymoses near the pylorus, which I considered to be the effect of spasmodic vomiting. We find the duodenum red and inflamed, and the inflammation appears to extend in proportion to the duration of the disease. The disorder appears to be the highest stage of congestive fever, and if we can succeed in making the blood circulate through the lungs, and consequently through the whole system, we have found a remedy for the disease. Though there are some symptoms similar to the cold stage of an ague, I do not remember to have noticed any tremor or shivering. In 1817, a medical friend of mine (Mr. Courling) found bleeding to be very beneficial, but in 1828, Dr. Moutat, surgeon, Her Majesty's 14th regiment, found it injurious, or at least of doubtful benefit. He also stated that some severe cases of cholera occurred in a native regiment, in which eleven men died out of twelve attacked. In these cases, there was purging without any vomiting, and to the best of his recollection (the patients not being under his care) there was a total absence of spasm.

Mr. Hind considered the emetics were useful in bringing on reaction. He referred to the plan of treating the disease by calomel and opium, as extensively tried in 1832. That plan had been found wanting. The experience of Dr. Graves confirmed this. He (Mr. Hind) had found no benefit from large doses of calomel or opium. The acetate of lead appeared to him to have the most effect in stopping the profuse alvine discharge. This medicine was given in doses of two grains, with an eighth to a twentieth of a grain of opium, every half hour, according to the severity of the symptoms.—*Medical Gazette*, Nov. 17, 1848, p. 854.

DR. GRAVES, of Dublin :—

[Dr. G. in his work on clinical medicine, advocates the use of acetate of lead and opium. He says :]

The mode in which I administered it was this :—a scruple of the acetate of lead, combined with a grain of opium, was divided into twelve pills, and of these, one was given every half hour, until the rice-water discharges from the stomach and rectum began to diminish. In all cases where medicine promised any chance of relief, this remedy was attended with the very best effects. It gradually checked the serous discharges from the bowels, and stopped the vomiting. I need not say of what importance this is: as long as these exhausting discharges continue, as long as the serum of the entire body continues to be drained off by the intestinal exhalants, what hope can we entertain? What benefit can be expected from calomel and stimulants, when every function of the digestive mucous membrane seems to be totally extinguished, except that of exhalation, and while profuse discharges, occurring every five or ten minutes, are reducing the patient to a state of alarming prostration? Knowing the inevitable fatality of all cases where these discharges went on unchecked, I was happy at having discovered a remedy which seemed to possess more power in arresting them than any yet devised, and this impression was confirmed by the results of subsequent experience.

That the acetate of lead will succeed where all other astrin-gents fail, was proved by the case of Mr. Parr, of this hospital having got an attack of threatening diarrhoea, at a time when

cholera was prevailing in Dublin, this gentleman used various kinds of astringents, and took so large a quantity of opiates, that he became quite narcotized, but without any relief to his symptoms. When I saw him he was as bad as ever, and was beginning to exhibit appearances of collapse. I advised the use of pills composed of acetate of lead and opium, in the proportions already mentioned, and had the satisfaction of finding that before night the diarrhoea had ceased. The pills are to be used one every half hour while the diarrhoea remains unchecked, but as it begins to diminish, the intervals between each pill may be prolonged, and in this way the patient may be gradually prepared for leaving off the remedy altogether. I have frequently given in this way as much as forty grains of acetate of lead in twenty-four hours, with great advantage to the patient, and without any bad consequences ensuing.

It is unnecessary for me to say any more on this subject; if I chose to mention names, I could bring forward the names of many medical men in Dublin, whose lives, I am happy to state, were saved by the use of this remedy. I may, however, observe, that this mode of treatment has now become universal here, and that it has almost completely superseded the use of calomel and opium. I will confess that this fact is a source of high gratification to me, and I point also with pleasure to the fact, that since it became extensively known (as it did during the last invasion of the epidemic), the profession has gained more credit than before, and the number of cures has been proportionally greater.

I may remark that the most convenient way of making the pills is to add five or six grains of powdered liquorice to the scruple of acetate of lead, and mixing into a mass by means of mucilage of gum-arabic. Year after year since I first made public the value of this plan of treatment in cholera, I have received the most gratifying letters as to its successful employment, from practitioners in India. The following observations of Dr. Parkes, who had the opportunity of witnessing two recent outbreaks of cholera in India in 1843 and 1845, while serving as assistant surgeon in one of H. M.'s regiments, I look on as a most valuable testimony. I quote from his essay on Cholera, to which I have already referred. At page 207 he says:—

"Of all the astringents which have been used in cholera, none has appeared so efficacious as the one recommended by Dr. Graves, viz., the acetate of lead. It is true that it did not arrest the purging in all cases, but it possessed this great advantage, that in the form of pill with opium, it did not seem to increase the irritability of the stomach, but rather to allay it. I used to give two or three grains with a quarter of a grain of opium, every half hour for the first two or three hours, and then every hour for a variable period according to the intensity of the case. It was often found that the vomiting first ceased, and then the purging; the Algide symptoms were of course unaltered, but, as already said, no remedy yet known possesses any influence over them, and it is the best way to leave them altogether to themselves, and take the chance of their not advancing to their full extent. The only bad effect I ever noticed after the employment of these large doses of lead, was subacute gastritis; but this is a comparatively trifling affair, and can be generally overcome by relays of leeches to the epigastrium during the period of reaction."

Dr. Thom, surgeon, of the 86th regiment, in an account of the cholera as it affected that regiment at Kurrachee in 1846, thus speaks of the combination:—

"The acetate of lead, in doses of one, two, or three grains, and one-eighth of a grain of acetate of morphia, was employed to stop those profuse watery dejections which continued in some cases after reaction had taken place; and in this point of view it was a most useful remedy. Of course in those cases where vomiting and purging are the first symptoms, and collapse appears to be their consequence, the early use of this remedy was resorted to, and with very good encouragement."

It is no small compliment to Dr. Graves, that the suggestions for the treatment of cholera patients, just issued to the Parochial Boards by the Royal Colleges of Physicians and Surgeons of Edinburgh, include among the medicines, the pills of acetate of lead and opium, which are directed to be kept constantly at each station. This will ensure a full and fair trial for this mode of treatment.—*Medical Gazette*, Nov. 3, 1848, p. 760.

DR. E. J. SHEARMAN, Rotherham:—

I have been much delighted and instructed by the perusal of

Dr. Parkes' late valuable contribution to the little stock of knowledge we possess of the pathology of cholera; and cannot help remarking that, to me, his information appears more likely to be correct than that of any other author. I saw a good deal of it in 1832, and there is a truthfulness about his researches which carries conviction with them.

Dr. Parkes distinctly proves, that in the stage of collapse the right side of the heart does not empty itself; all the branches of the pulmonary artery are gorged to the greatest extent; there is no blood in the lungs; and the left side of the heart and arteries are empty; the serous, albuminous, and saline parts of the blood ooze through the different tissues, and are evacuated; the fibrine of the blood alone being found in the intestines.

Now this must be owing either to the choleraic poison having so chemically altered the blood that the oxygen of the atmosphere cannot act chemically upon it, and the venous blood remains in the pulmonary artery; or the choleraic atmosphere is of such a nature as to prevent the chemical combination of it with the blood of the individual in respiration. Unfortunately, Dr. Parkes had not the means of chemically and pathologically examining the blood of his cholera patients; but the former position appears the most tenable, from the immediate good effect produced by injecting a solution of albumen and salts into the veins, which, unhappily, does not last long enough to allow nature to weather out the disease.

When a case has reached this period, it is almost invariably fatal, for no absorption can take place, the venous system is full, and all medicine and nourishment introduced into the stomach must be useless.

But may not the red globules of the blood become poisoned and useless? And if so, what use would the albumen and salts be, if there were no oxygen carriers?

Reflecting on this subject since reading Dr. Parkes' work, I have made up my mind, should nothing more be discovered respecting the pathology of cholera, and considering the failure of every other mode of treatment, that I will treat any cases verging into the stage of collapse, by first taking away as much blood as I reasonably can from a vein in the arm, (no easy matter,) and then immediately transfuse warm blood from the most healthy subject I can meet with; and keep up respiration as long as possible with a mixture of equal parts of oxygen gas and atmospheric air. Although this will not dislodge from the branches of the pulmonary artery the poisoned blood, it must give nature a better chance of carrying on circulation and respiration, than by injecting merely albumen and salts, without any healthy red globules.

I think respiration may be carried on, in such cases, by using a modification of my friend Sibson's mouth-piece, which he invented for the inhalation of chloroform; and oxygen gas can be kept ready prepared over water for a great length of time.

The first, or premonitory stage of cholera, requires merely common astringent remedies. The next stage, where the vomiting and purging are accompanied by cramps, seems to admit of two grand modes of treatment—viz., tartar-emetac, and acetate of lead with opium; together with various external remedies, to relieve particular symptoms. In 1832, I only became acquainted with Mr. Hott's (of Manchester) treatment by tartar-emetac, when the disease was subsiding; but all the cases I treated with it certainly recovered. In the *Lancet* for the 16th of September, 1848, there is a valuable communication from my friend, Dr. C. Radcliffe Hall, on this subject, well worth perusing; and I can add my testimony to the success which attended that mode of treatment.—*Lancet*, Oct. 14, 1848, p. 418.

*On Inunction with Lard in Scarlatina.*—The following plan of treatment in scarlatina is advised by Manthner, an undeniable authority in diseases of children. He observes:—"I owe to M. Schneeman an excellent method of treating scarlatina, and one from which I have derived the best results; this is, the inunction of the entire surface with lard. These inunctions never do harm; they are cheap, and may be employed by all classes. I am confident that they cause desquamation to take place more readily, and that dropsical sequelæ are less likely to occur. Moreover, if used as a prophylactic, the disease is less likely to spread in a family. I would, without hesitation, treat my own children in this

manner, were they attacked by a disease which I so much dread, but I should fear to employ cold affusions."—*Rev. Méd. Chir.*, Jan., 1849.

*Sequel to the Cholera in Paris.*—Much stress is laid by Dr. Vidal (de Cassis), Surgeon to the Venereal Hospital of Paris, on the immunity from Cholera enjoyed by the patients of that hospital. This gentleman does not, as yet, deduce any practical measure from this fact, but requests an inquiry on the part of the leading members of the profession. It seems to us, that the immunity here spoken of, having likewise existed in 1832, is well worthy of notice, though the circumstance of twenty-one cases and seven deaths from cholera having, up to the 13th of June, occurred at the Hôpital de Lourcine, (Female Venereal), rather militates against the position, that either the syphilitic virus, or mercury, is an antidote to the choleraic poison. Still we find Dr. Debrouettes, of Dieppe, writing to the Academy of Medicine, and recommending calomel in cholera, upon the strength of the freedom experienced at the Venereal Hospital, just as if calomel could not be recommended (as, for instance, on Dr. Ayre's suggestion) upon its own well-known action. A madman, named Provencal, house physician at the Montpelier Hospital, writes, on the same subject, to the Academy, and proposes that the syphilitic virus should be inoculated, as a prophylactic of cholera! M. Velpeau remarked, in a late meeting of the Academy, that many of his colleagues had treated cholera patients affected with syphilis; and M. Gimelle added, that he had lately had under his care a young man of twenty-six, affected with chancre; he was taking proto-iodide of mercury for this affection, when he was carried off by cholera in a few hours. M. Ricord explicitly maintains, in a letter addressed to *L'Union Médicale*, on June 16, that neither syphilis nor mercury, nor the two influences combined, are proved to preserve from cholera. He attributes the immunity of the Hôpital des Vénéériens to the comparatively few patients of the establishment, and its salubrious situation; and very aptly remarks, that the Maternity Hospital, situated only a few yards from his hospital, enjoys the same immunity from cholera. Thus, we find the two surgeons of the Hôpital du Midi—viz., M. Vidal (de Cassis) and M. Ricord, differing widely on this subject. The latter gentleman enters into extremely interesting details in his letter. We regret that want of space forbids our entering more fully into the consideration of this important communication. Among the remedial measures proposed, we must not omit M. Fiorry's. This gentleman, considering that cholera patients die for want of water in the blood, had this liquid thrown, in large quantities, into the bladder of a man dying of the disease. No less than two quarts were injected in one hour, and absorption was rapidly proceeding, as ascertained by the plessimeter; the pulse rose; the veins, which were almost empty, began to refill, and the man was improving; the ultimate result is not yet known. This fact was communicated to the Academy of Sciences on the 11th June: at the same meeting, some very interesting statements were made by M. Audrand, respecting the absence of electricity in the atmosphere, during the present epidemic. This gentleman has made his observations with a circular glass-plate machine, which, in ordinary times, gives sparks about an inch long, by two or three turns of the plate. He has been unable, since the breaking out of the epidemic, of once producing this result. In April and May, a great many turns were necessary to produce sparks of an inch, and the variations in the size of the sparks have accorded with the oscillations of the disease. During the very hot days, on the 4th, 5th, and 6th, of June, nothing but crepitations, without sparks, could be obtained; on the 7th, the machine could not be made to yield anything, (720 persons died on the 8th.) A few sparks re-appeared on the morning

of the 8th, and after the storm, which broke out on that day, numerous sparks could be obtained by the slightest touch of the plate.

M. Raspail, well known by his chemical works, and still better by his extreme politics, maintains that he can cure cholera with camphor, and the public of Paris are quite enthusiastic about the smoking of camphor cigarettes. These, our readers are aware, have been long recommended by M. Raspail as sovereign remedies in all diseases; and though there are no actual facts giving the slightest support to this method, as far as the present epidemic is concerned, it is reported that the author, who is locked up at Doullens, cannot reply to all the huge medical correspondence which he carries on from his prison. Numerous deaths from cholera, among medical men, have been reported: among them we find M. Bourgerie, the author of the work entitled "*L'Anatomie de l'Homme*," which, unfortunately, is left unfinished, and upon which twenty years' labor have been bestowed; M. Boudet, member of the Academy of Medicine; and M. Mojoin, of Genoa, an eminent surgeon under Napoleon, and long settled in Paris. Professor Bouillaud is likewise reported to be suffering from a very severe attack of cholera. A little village of the department of the Oise, numbering about 2000 inhabitants, has been attacked both by the cholera and the sweating sickness; in a short time nearly 100 people had died. Medical men, hospital pupils, and sisters of charity, were speedily sent down from Paris, and their efforts, guided and organized by M. Mélier, a member of the Board of Health, who volunteered his attendance, are likely to do much good. A drunkard finding his wife dying of cholera, had the cruelty, whilst in a state of inebriety, to heat her violently. This rough usage, far from destroying her, as might be expected, roused her, brought on powerful reaction, and saved her. This reminds us of the flagellations recommended in cases of poisoning by opium. The dissecting-rooms of Clamart have been closed, by order of the Director of Hospitals, till the end of June, to prevent any insalubrious effects from the accumulation of subjects. The municipal body of Paris have voted £6000 for burial expenses, and £2000 for the extraordinary cholera dispensaries. The Council of the Bank of France have sent £1000 to the Prefect of the Seine, to be distributed to poor families bereft by cholera. Two large mansions belonging to the state, one lately occupied by General Cavaignac, the other by the Austrian ambassador, have been converted into cholera hospitals. Opinions are still at variance as to the contagious nature of cholera. A warm discussion took place on the subject the other day, at the Academy of Medicine, and it is but right that our readers should know, that so high an authority as M. Velpeau affirms that the disease is contagious. A contagionist medical practitioner of a certain village, having struck terror into the minds of the people, the sick remained without assistance, and the dead without burial, so much so that the clergyman was obliged to bury them himself. M. Mélier, who mentioned this circumstance in the Academy, promised to name the place to the cholera committee. Eating-houses and butchers' shops are being examined by the police, upon an order from the Board of Health.

*The Royal Society.*—The following distinguished members of the profession have been elected fellows of this institution:—Sir Robert Kane, M. D., John Dalrymple, Esq., Henry Beaumont Leeson, M. D., Francis Sibson, M. D., and T. Andrews, M. D.; the number elected on the same day, inclusive of the above, was fifteen out of thirty-one.

*Melanosis of the Liver, Pancreas, Kidneys, Ovaries, Eyeball, &c.*—The female from whom these melanotic deposits



were removed, was admitted into the London Hospital, January 30th, 1849, under the care of Dr. Little. Habit spare, temperament dark, and presenting the peculiar aspect of organic disease: her age is 34. She stated that she had suffered considerable pain in the right eye during the last three years, and had completely lost the sight of the eye for twelve months, and that with this exception her general health had been good, until four months previous to her admission into the hospital. The symptoms which she then presented, and from which she subsequently died on February 17th, were ascites, some degree of dyspœna, considerable pain in the abdomen, and extreme debility. Her urine during the time she was under treatment averaged 1023 specific gravity, and presented a large deposit of lithates, and was rendered quite black by the action of heat and nitric acid.

*Post-mortem examination.*—The body was extremely emaciated; the superficial veins considerably enlarged and congested; the legs œdematous. Minute tumors were found scattered beneath the skin of the abdomen and thighs. The structure of the brain appeared healthy, with the exception of a few spots of black matter found dotting the floor of the lateral ventricles, while a number of small masses of the same kind were contained in the choroid plexus. The membranes were normal, excepting several patches of melanosis on the dura mater.

The lungs healthy and crepitant throughout, a number of black patches being disseminated, however, over the pleura costales and pulmonales. On opening the abdomen, the liver enlarged, and weighing 18 lbs., was found occupying a large portion of its cavity; the entire organ, with the exception of the lobulus quadratus, being one mass of melanotic disease, which gave to a section of the liver the appearance of dark granite: the consistence of the morbid portions was very soft, causing many parts to break down under the slightest pressure. The peritoneal covering of the stomach, intestines, and spleen, the substance of the pancreas, kidneys, and ovaries, were considerably infiltrated with melanotic matter, the ovaries particularly, being enlarged, and uniformly black from the presence of the deposit. A mass of melanotic matter, almost as large as one half the globe of the eye, was found lodged in the posterior part of the orbit, intimately connected with the sclerotic and conjunctival coverings, and entirely surrounding the optic nerve. The thyroid gland, the muscles of the larynx and pharynx, and the mammary gland, were also found infiltrated with melanosis.

On microscopic examination, the black deposit was found to present the ordinary appearances of melanoid cancer—viz. encephaloid cancer cells, more or less filled with pigment granules. The cells were found in different degrees of coloration; some only partially filled with the dark pigment points, and others entirely opaque from their interiors being thoroughly filled with this matter. Other cells, of a roundish shape, nuclei and elementary granules, were found in great numbers, as well as the structureless substance which Rokitansky terms the membranous stroma. The appearance of the caudate pigment infiltrated cells appeared to bear out the view of that writer, that the pigment in these cases had been formed within the cancer cell, and that the coloration was not the effect of extravasated blood or of pigment granules, around which a cell covering had been developed. The absence of the disease in the lungs and the bronchial glands, is worthy of note. Lastly, the rapidity of the development of the mass of the liver in five months, while it characterizes encephaloid disease, generally corroborates to a certain extent the view that melanosis is truly a modification of medullary carcinoma.

*Treatment of Neuralgia according to their Seat.*—[The author, M. Sandras, passes successively in review neuralgia

of the fifth pair of the cervical plexus, ilio-sciatal neuralgia, crural and sciatic neuralgia. His treatment is expressed in the following *resumé*:—]

Neuralgia of the fifth pair yields more readily than any other to the internal administration of belladonna. He has also derived benefit from a plaster of the black cyanide of potassium. The pomade of strychnine has only appeared useful when, after the attack has subsided, the skin has retained an exaggerated sensibility.

In temporal neuralgia, with the employment of belladonna internally, or conjoint compression of the temporal artery.

In suborbitar neuralgia, the endermic use of morphine, and the cyanide of potassium, succeed better than in temporal or cervical neuralgia.

In submaxillary neuralgia, belladonna is the most useful remedy; compression of the carotid likewise affords relief.

The same treatment is beneficial in cervical and occipital neuralgia, but in this form compression of the artery is of little or no use.

The treatment is likewise the same in intercostal crural, and sciatic neuralgia, but the author observes that these forms are often accompanied or produced by neuritis, and that it is therefore advisable to premise the treatment by topical abstraction of blood.—*Gazette Médicale*, Dec. 30.

*Chorea Successfully treated by Arsenic.*—A case of this kind occurred recently in the clinique of M. Guersant. The practice is derived from the testimony of the profession in this country, and has also been extensively employed in Germany. M. Homberg regards it as the most effective of any of the medicines recently given, and finds it often succeed where others have entirely failed. Some of his cases are given below:—

*Case 1.*—A little girl aged 11, had been affected with chorea for eight years, which had resisted a variety of modes of treatment. On the 22nd of Nov., she commenced Fowler's solution in small doses, and in three months was completely cured.

*Case 2.*—A case of chorea caused by fright, in a girl ten years of age, and of two years duration. Jan. 29th, 1844, commenced the arsenical treatment, cured by the 6th of May.

*Case 3.*—A girl aged 12, was the subject of chorea three years previously, and had a relapse in 1843. Purgatives and carbonate of iron failing to produce any amelioration of the symptoms, arsenic was given and found successful in a very few days.

The dose for a young child should not exceed two drops of Fowler's solution to commence with.—*Casper's Wochenschr.*—*Encycl. Med.*, December.

*Quinine in Cholera.*—Dr. Little says, (*Lon. Med. Gaz.*, Dec. 15th, 1848,) from all he has witnessed of malignant cholera, he is impressed with the belief that it is more nearly allied to the febres than to any other nosological class, and, consequently, he considers that quinine administered before the supervention of decided collapse in the large doses required to arrest malignant intermittents, say in doses of half a drachm and upwards, deserves a trial.—*Am. Jour. of the Med. Sciences.*

*Employment of Nux Vomica in the Diarrhœa of Exhaustion.*—Dr. Nevins mentioned, at the meeting of the Liverpool Medical and Pathological Society, the benefit derived from the employment of nux vomica in the treatment of the diarrhœa from exhaustion, chiefly observed in pauper patients, and especially children. In these cases he had repeatedly found no benefit from astringents and ordinary tonics, but the

patients had rapidly improved under the use of the following prescription: Alcoholic extract of nux vomica (not official, but prepared by most wholesale druggists,) gr. ss; rhubarb, gr. ss; saccharated carbonate of iron, gr. j; blue pill, gr. ss; opium, gr. ʒ, made into a pill, and taken three times daily. In many cases he omitted the opium altogether.

He attributed the benefit to the influence of the nux vomica, which by stimulating the nervous energy of the bowels, enabled the lacteals to absorb the nutriment from the food, and the large intestines to retain the feces; whilst at the same time the iron acted as a permanent tonic; and the very small doses of rhubarb and blue pill improved the character of the secretions, without acting as an aperient. Improvement was generally perceptible in a few days, and he seldom had occasion to continue the prescription more than a fortnight.

Mr. Taylor, of the Liverpool workhouse, confirmed this account from his experience of many cases in the same class of patients in whom he had tried it, on Dr. Nevins' recommendation.—*London Medical Gazette.*

*On the Absorption of Insoluble Bodies.* By M. Mialhe.—In our review of Mialhe's *Traité de l'Art de Formuler* (July Number, p. 37), we mentioned that the experiments of Oesterlen, in which he found that charcoal, administered by the mouth to fowls and rabbits, passed into the blood, in which fluid the carbonaceous particles might be detected by the microscope, were opposed to Mialhe's doctrine, that "every substance, capable of exerting a remote action on the animal economy, is soluble, or susceptible of becoming so in the fluids of the body" \* \* \* such substances alone being capable of absorption."—(See also *Journal* for May, 1817, p. 488) M. Mialhe has since repeated the experiments of Professor Oesterlen, and asserts that charcoal, when thus administered, does not pass into the circulation.—*Ret. of Med. Sci. from Gaz. Med. de Paris, August 19.*

*Analysis of the Blood in Cholera.*—Dr. William Robertson read an account of his observations on the blood drawn from patients laboring under cholera. He grouped the cases under four heads, described the appearance and general properties of the blood in each, and exhibited the general chemical results obtained from thirty analyses, conducted according to Andral and Gavarret's process. Five of the analyses were made by Dr. Douglas Maclagan, one by Dr. Christison, and the rest by Dr. Robertson.

*Average Constitution of 1000 parts of Cholera Blood.*

	Fibrine.	Org. Solids.	Inor. Do.	Glob. wates.	Total Solids.	Water.	Sp. gr. of serum.	Sp. gr. of blood.
Early stage	2.7	82.2	7.5	103.4	196.1	803.9	1030.0	1053.7
Early collapse	3.2	91.0	7.0	130.8	235.0	765.0	1033.7	1059.5
Collapse	3.2	101.2	6.9	130.0	241.3	758.7	1036.6	1066.9
Reaction stage	3.5	76.6	6.6	126.7	212.4	786.6	1030.6	1057.9

Distinct indications of the presence of urea had been obtained both by Dr. D. Maclagan and by Dr. Robertson, upon testing blood taken from the heart and veins after death; and on one occasion Dr. Maclagan had obtained similar indications, upon examining blood drawn from the arm during the early stage of the disease. Urea seemed most abundant in the blood of patients who died during the stage of reaction; 1000 grains of blood yielding, in one case, 1.6, in another .73 of nitrate of urea. The chief conclusions which these analyses, coupled with certain phenomena of the disease, suggested, were, 1st, That anæmia, or an impoverished blood, acted as a predisposing cause of cholera. 2ndly, That although during cholera the relative proportions of the blood constituents was rapidly and singularly altered, there was yet no evidence that the primary operation of the morbid poison was exerted upon the circulating fluid; the

chemical changes recorded were only the effects of the morbid process. 3rdly, That the changes which the blood underwent up to the period of reaction, consisted in a concentration of the serum from loss of water, and a loss of salts almost proportionate to the amount of water abstracted. 4thly, That the proportion of salts was lower during reaction and convalescence than during the progress of the disease. For every 1000 parts water, there existed during the early stage 9.7, during early collapse 9.2, during collapse 9.1, consequently the phenomena of the stage of collapse could not be due to the loss of salts, and that the saline treatment did not rest upon a good theoretical foundation. 5thly, That the changes observed during reaction were probably due, in part, to absorption of fluid into the circulation, and consequent dilution of the blood. This absorption sufficiently accounted for the small per centage of inorganic serous solids during reaction, and might assist in explaining the marked diminution of organic serous solids. 6thly, That during reaction the fibrine was often proportionately increased, and that there was reason to believe that blood corpuscles were, at the same time, rapidly formed. 7thly, That the albumen, which was withdrawn from the circulation, was metamorphosed, converted into tissues excreted by the bowels, and in most cases likewise excreted by the kidneys. In nearly eighty per cent. of the urines examined during convalescence, albumen was detected; its absence might, accordingly, be regarded as exceptional. 8thly, That the formation and retention of urea in the blood was always to be decaded during reaction, and hence, that the use of diuretic remedies, and especially of such as were believed to possess the property of expelling urea from the system, was clearly indicated. Tabular statements of the analyses were exhibited.

Dr. Christison enquired if an experiment which he had made during the former epidemic, and which proved that the dark blood of cholera was yet quite susceptible of arterialisation, had been confirmed on this visit of the disease. He had found that the blood, when defibrinated by agitation in a phial with pieces of zinc, rapidly assumed the arterial hue when subsequently agitated with atmospheric air or with oxygen gas. Dr. Douglas Maclagan and Dr. William Robertson had both recently confirmed the accuracy of Dr. Christison's observations.

A conversation followed, chiefly regarding the effects of remedies during the recent epidemic. It was stated, that the saline injection of the veins had been practised in the cholera hospital in twenty-five or twenty-six cases, and that although remarkable temporary benefit seemed sometimes to result, no patient had survived the operation more than eight days. In 1832 about 1-6th of those whose veins were injected recovered; profound collapse was, however, not always waited for before recourse was had to the operation. The diuretics used on the present occasion were bitart. potass, nitre, digitalis, colchicum, and tinct. lyttæ. Blood-letting practised early was the remedy which Dr. Robertson had found most efficacious in averting the most formidable symptoms of the disease.—*Prac. of Eding. Med. Chir. Society.*

*On Influenza and Ozone.*—By Dr. Spengler, of Elville.—Dr. Spengler remarks, on the incomplete state of our knowledge of the etiology of epidemic diseases, that the present crude theories of their dependence upon certain indefinite degrees of heat or cold in the weather will no longer be admitted; but that, by following up the discovery of ozone by Schönbein, we shall, having a tangible point whence to start, arrive at the clearness of truth, instead of the darkness which has hitherto hung over the subject. He states, that in the village of Roggendorf, in Mecklenburgh towards the close of 1846, slight catarrhal affections

became prevalent, that but slight trace of ozone was then to be detected in the air. With the opening of the following year, however, these catarrhal affections assumed the severest forms of tracheal and bronchial disease, and whooping-cough became common, both among children and adults; then re-agents detected a great increase of ozone in the atmosphere, and, at the same time, influenza spread over the district. On the 9th January the *ozonometer* showed a still further increase in the proportion of ozone present in the air. On the same day two persons died of influenza, and gradually the influenza spread more extensively, until on the 21st scarcely an individual had escaped. Thus there seemed a decided connection between the presence of ozone in the air and the spread of the epidemic.

Ozone is formed in the air by the decomposition of its water through disturbances of its electrical equilibrium; hence the peculiar pungent sulphurous and phosphoric odour. The nature and composition remains as yet uncertain. Sulphuric, probably also telluric and selenic acids, and phosphoric acid, destroy it. A very small proportion of the vapours of ether or alcohol, or of olefiant gas, will also prevent its development.

Its best test is iodide of potassium, which will detect its presence in infinitely small quantities in the air. A piece of paper moistened with a mixture of starch and solution of iodide of potassium forms an *ozonometer* far exceeding in delicacy the most accurate galvanometer or the most sensitive nose. The smallest quantity of free ozone (even only in the proportion of a hundred-thousandth) when neither galvanometer nor eudiometer show any change in the air, will be rendered manifest by the discoloration produced by the free iodine.

At the beginning of the epidemic we have noticed there was but slight discoloration; it gradually became darker, till at last the *ozonometer* exhibited a blackish-brown color.

As the presence of ozone in the air is due to its electrical decomposition, it is necessarily influenced by its electrical tension.

If the prevalence of influenza and epidemic catarrh be owing to ozone, the vapours of sulphur, or sulphurous gases, must be protective against it. This is confirmed by (while it explains the immunity of) those engaged in or living near sulphur-works.

Dr. Spengler has been induced to publish his observations with the hope of inducing others to make further investigations into the existence and nature of ozone.—*Med. Gaz. from Henle's Zeitschrift.*

*Ozone, and its Connection with Epidemic Diseases.*—Ozone to which influenza is ascribed by Schönbein, and Cholera by some of our Western brethren, has been variously described and defined. It has been imagined to be a combination of nitrogen and oxygen in some new proportion; or a new combination of oxygen and hydrogen. Spengler is quoted in the *Lon. Med. Gaz.* for Nov. 1848, as saying that it is "formed in the air, by the decomposition of its water through disturbance of its electrical equilibrium." Professor Draper, of the New-York University, regards it as the active state of oxygen or oxygen rendered active by electricity. This opinion, which is clear and intelligible, seems to be proved to be true, also by the experiment of passing a current of electric fluid through pure oxygen; ozone is thus obtained, having a sulphurous odor, setting fire to phosphorus, and irritating the nostril, as in catarrh.

The test of its presence is a bit of paper dipped in a solution of iodide of potassium, and then in one of starch. The oxygen of common air acts slowly on it, and produces gradual change, and coloration. Ozone and ozonized air will occasion them to act promptly on each other producing a dark blue color.

The description given by Spengler of its mode of production is not easily understood; he goes on as vaguely to add—"Hence its peculiar pungent sulphurous, phosphorous odor." Whence? From the electrical decomposition of water. This gives us nothing that we know of but oxygen and hydrogen, which in their ordinary states, have no such odor. He goes on to say that "sulphuric, probably telluric, selenic, and phosphoric acids destroys it. Vapors of ether, or alcohol, or olefiant gas prevent its development."

Dr. Moffatt,\* from the results of his experiments and observations, comes to the conclusion that the presence of ozone in large quantities in the atmosphere is invariably attended with catarrh and mucous diarrhœa. Dr. Gouiding Bird, † at a meeting of the Medical Society of London, held in October last, while the subject of cholera was under discussion, said that he had remarked and noticed it as a somewhat curious fact, that of late ozone, or peroxide of hydrogen, had been found in the atmosphere. Dr. Parkin, an English physician, residing in Spain, says he has used charcoal with great success in the treatment of cholera; he used it in doses from a tea-spoonful to a table-spoonful in water every two or three hours. Dr. Spengler, from his observations, has been led to believe that sulphur or sulphurous gases must be an antidote to the poisonous influences of ozone. Dr. Bird and Professor Herrick, of Chicago, have detected the presence of ozone in the atmosphere of Chicago during the present epidemic, and both speak decidedly in favor of three or four grain doses of sulphur combined with charcoal. Professor Herrick says, "that all premonitory symptoms, such as pain, a sense of fulness, unnatural movements, slight diarrhœa, &c. have uniformly yielded to this remedy" (? Ed.) In this city no such success has followed its use. To the pathologist the inquiry into the nature and influence of ozone has, indeed become truly interesting.—*New-York Journal of Medicine.*

*On the Various Modes of Treating Cholera now in force in the Hospitals of Paris.*—We continue our account of the French treatment of cholera, by the following more detailed description of the different methods now employed in the Parisian Hospitals, by the most respectable physicians of the day. The first we shall notice is the—

*HÔTEL DIEU.*—The inmates of this hospital are in general the destitute of both sexes, and all ages. It has the reputation of being one of the least salubrious establishments in Paris, being situated on the very banks of the Seine, and its wards being ill-ventilated and over-crowded. The medical staff is, on the contrary, one of the most enlightened, consisting of men who base their practice on the doctrines of physiological and pathological science, so far as its principles are fairly established. The practice of these men is, therefore, as might be expected, tolerably uniform, and is guided by the indications afforded by the principal groups of symptoms of the disease.

Thus, for the premonitory diarrhœa, the majority employ opium and astringents, and reject emetics, cathartics. For the vomiting they give ice and iced seltzer water; for the collapse, external warmth, and stimulants internally; for the secondary fever and local symptoms, local bleeding, &c. We see, therefore, that among the physicians of the Hotel Dieu, there are no cholera specifics, and no pure empiricism; but we will glance at their individual treatment more in detail.

*Chomel* recognizes several forms of cholera, as the nervous form, the algide, the gastro-intestinal, and the inflammatory; the first characterized by the predominance of pain and cramps; the second, by the diminution of temperature, and the embarrassment in the organs of circulation and respiration; the third, by the abundance of the evacuations; and the last, which is rare, by symptoms of acute gastritis or dysentery.

In the first form he gives opium either by mouth or rectum; in the second he applies external warmth, preferring the hot-air bath to other modes. Internally he gives hot tea, punch, &c. If the patient complains of a sensation of intense internal heat, he either

\* British Association.—Athenæum.

† London Med. Gaz. for Oct.

omits the stimulants altogether, or gives ice internally in conjunction.

Vomiting and diarrhœa are combated by ice, bismuth, and by astringents. If the respiration is much embarrassed he bleeds.

*Louis* treats cholera much in the same manner, but applies the remedies more regularly, and with less regard to the supposed varieties of the disease.

*Rostan* prefers hot water baths, of 40° cent., to hot air or vapor, at the same time he gives stimulants, as brandy and ether, internally, and friction with stimulating embrocations. Under the impression that the secretions are acid, he administers ammonia or lime-water. If vomiting persists in spite of opiates, he applies a large blister to the epigastrium.

*Martin Solon*. This physician adds to the above treatment means calculated to modify the crasis of the blood. He first tried salt, but being disappointed in the results, he now has recourse to the sesquicarbonate of ammonia. In the suspension of the diarrhœa, he administers enemata, containing bismuth.

*M. Honoré* adopted the above system, with little or no modification, but his successor, *M. Leger*, entirely changed the routine, substituting the saline treatment of Stevens.

*M. Tardieu* at one time tried sea-water, in doses of a table-spoonful at short intervals, but finding no great superiority in the natural over the artificial salt-water, he returned to the plan followed by *M. Leger*.

The results of the treatment in the Hotel Dieu are—210 deaths out of 415 cases, 87 remaining under treatment.

**LA CHARITÉ.**—The sanitary condition of this hospital is but little in advance of that of the Hotel Dieu, but its inmates are in general of a class somewhat less impoverished, and consequently more robust. The physicians are men of good reputation, but exhibit less uniformity in their treatment than those of the Hotel Dieu.

*M. Fouquier* gives an emetic in the onset, after which he trusts to stimulants and opium.

*M. Rayer* bleeds when practicable, caps the abdomen repeatedly and gives opium freely by mouth and per anum.

*M. Cruvelhier* has no fixed method of treatment; he gives aromatic stimulants, with opiates, and is partial to repeated sinapisms. He was one of the first to try the *stachys*, but found its value much exaggerated.

*M. Bouillaud* adopts the saline treatment, and eschews blood-letting in every shape.

*M. Briguet* directs all his attention to the removal and prevention of the collapse, attending at the same time to the suspension of the evacuations. For these purposes he uses the hot-air bath, alcoholic and aromatic stimulants and sinapisms. If these fail, he resorts to the alternate use of iced and hot drinks. Latterly he has tried emetics of ipecacuanha.

The total number of cases submitted to treatment in La Charité is 274, of which 154 proved fatal, 57 were cured, and 63 remained under treatment.

**HOSPITAL OF VAL-DE-GRACE.**—This hospital differs from the preceding in being a military establishment, and having for its inmates men only, and those generally robust and well fed. The hospital itself is exceedingly well situated.

*M. Levy* considers that the treatment of cholera can only be conducted on natural principles during the premonitory stage and stage of reaction. The cold stage admits only of empirical measures. In the latter he has tried a variety of medicines—as Indian hemp, strychnine, turpentine, chloroform, &c., but without success.

The statistics of the disease in this hospital are decidedly favorable as compared with the others, which may be attributed partly to the robust condition of the patients, but is chiefly due to the surveillance which is exercised over the military, and obliges them to report themselves on the slightest symptoms of illness. The numbers are 227; deaths 57; under treatment 72.

**LA PITIÉ.**—La Pitié is a well constructed and airy building, but the patients are derived from the most abject classes. The treatment adopted by its officers exhibits considerable difference.

*M. Serres* considers cholera as a variety of pernicious typhus, and therefore adopts the mercurial treatment, which he regards as the specific treatment of typhoid affections. He at the same time attends to the urgent symptoms—as vomiting and purging, for which he administers effervescent medicines and camphorated enemata.

*M. Piorry* insists strongly on hygienic precautions, as the only means of preventing the spreading of the disease. His treatment consists in large cold water enemata, with cold drinks *ad libitum*, and ice to the abdomen. In the stage of collapse he resorts to the vapor bath and internal stimulants.

*M. Gendrin* is an advocate for blood-letting at the outset of the premonitory symptoms, as also in the stage of collapse if possible; he at the same time gives stimulants internally. The number of cases treated at La Pitié were 272; of which there were 137 deaths and 61 remaining under treatment.

**St. Louis.**—*M. Gibert* has followed almost exclusively the system called *rational*, which consists in fulfilling the various therapeutic indications as they arise. Thus he treats the premonitory diarrhœa, by quiet, by sedatives, and mucilaginous drinks. The cold stage is treated by external warmth and external stimulants. The cramps are met by the exhibition of laudanum frictions. *M. Gibert* does not employ bleeding, or emetics, or in fact any kind of empirical treatment.

*M. Moissonet* trusts to the salt treatment. The numbers admitted into this hospital were 237, of which 113 died.

**HOPITAL BONJON.**—This is one of the finest hospitals in Paris, both as to situation and structure. The patients are mostly from the environs, but are poor and ill fed.

*M. Legrouz* trusts to external warmth, and internal stimulation by hot drinks, with or without the addition of alcohol. In some cases he bleeds before the cold stage is completely established, and in the stage of reaction. If the vomiting is urgent, he applies blisters to the epigastrium. For the diarrhœa he prescribes enemata of nitrate of silver.

In this hospital there were 133 cases and 83 deaths.

**THE SALPÊTRIÈRE.**—The account of the progress of cholera in this establishment requires a special consideration. This is the largest hospital in Paris, containing at least 5000 inmates, who are mostly old and infirm individuals, many the subject of chronic disease, and of epilepsy, or confirmed lunatics. As might be anticipated, therefore, the disease has here committed great ravages. The prevailing theory among the medical staff is, that the cholera is a disease, *sui generis*, requiring a special treatment.

*M. Guillot*, as did his colleagues, at the commencement of the epidemic, employed external and internal stimulants, but he speedily renounced this method, on account of his want of success. Subsequently he adopted the following:—

In slight cases cataplasms to the abdomen, enemata of rhatany root, hot-air baths; in severer cases, in addition to this, he gives the sulphate of ammonia, under the idea that it not only favors diaphoresis, but puts a stop to the fermentation, which is by many looked upon as the essence of the malady; he, at the same time, gives 50 centigrammes of calomel every ten minutes. He allows the patient to drink plentifully of rice water; in some instances he also gives mercury by enema.

Finding these means fail, he allowed a homœopathic conpeer to try his infinitesimals in a given number of cases, all of which died.

*M. Barth* prescribed astringents and opiates for the vomiting and diarrhœa, but finally resorted to the nitrate of silver alone, which he found in many cases to have the power of speedily checking the evacuations. Nitrate of silver was also exhibited by injection. In the stage of collapse he gives *Cannabis Indica* and common salt, both by mouth and rectum.

*M. Baillarger* at first adopted the stimulant plan, which he afterwards abandoned for the saline. He was one of the first to try the *stachys* anatica, from which so much was anticipated.

We need not further follow the different systems pursued in this hospital, the inefficacy of all of which is sufficiently manifest in the following *resumé* of the cases.

There were admitted up to May the 4th, 810; of these, the deaths were 602.

[We shall give the farther experience of the above hospitals in a future number of the Journal, should their reports prove interesting; in the meantime we would call our readers' attention to the significant fact, that at the commencement of the epidemic the mortality under every treatment, from the most heroic to the most inane—that of homœopathy—has been steadily 1 in 2, or thereabouts. We also derive the information that the premonitory symptoms, if attended to at their first appearance, are readily suspended,—a circumstance which cannot be too strongly impressed on the minds, both of the profession and of the public.—Ed.]

—*Provincial Medical and Surgical Journal.*

**Tetanus.**—Dr. Wilson is on these grounds inclined to refer the disease to augmented excitability of the true spinal system, of a purely functional character, and makes known in the following propositions, with which the memoir concludes:—

1st. That tetanus depends on irritation, direct or indirect, of the excito-motory system, by which it becomes surcharged with motor influence, and that inflammation in or about the cord, or any appreciable lesion, is not an essential condition of the development of the disease.

2d. That while we have ample evidence, physiological and practical, that opium is ill calculated to fulfil the indication in tetanus, namely, to diminish the excitability of the true spinal cord, until our views become improved, and the knowledge of our anti-tetanic agent ceases to be a desideratum, we are not justified in altogether discarding the use of the drug.

3d. That our grand object in the treatment of tetanus should be to support the patient's strength, with a view to compensate the vital powers for their great exhaustion, consequent upon the expenditure of force in the violent muscular contractions.

4th. That as the removal of the exciting cause, once that the first evidence of irritation propagated to the spinal cord becomes manifest, does not, in the least degree, check the progress of tetanus, or abate the violence of its symptoms, all operations in traumatic cases are not only unnecessary but injurious.—*Dublin Quarterly Journal of Medical Science.*

**Theory concerning the Cause of Diabetes.**—At a meeting of the Academy of Medicine, M. Mialhe read a paper on Diabetes. The author assigns as a cause of saccharine urine, and the disorders consequent upon its secretion, a want of sufficient alkalinity in the fluids of the body. To him the cause of diabetes is not a peculiar agent which gives diabetic patients the faculty of transforming certain alimentary substances into sugar, which later entering the current of the circulation is eliminated by the urine; but he maintains, first, that the transformation of amyloid substances into sugar is not peculiar to diabetic patients; that it is not accidental phenomenon, but that it is, on the contrary, a necessary part of the digestion and assimilation of food. Secondly, that this transformation is brought about by the agency of a special ferment, which the author has discovered in the salivary glands of all animals, and which exercises a specific action on frequent substances similar to the action of diastase (the active principle of malt) on starch, whence he calls this ferment *animal diastase*. Thirdly, amyloid substances must, in all animals, without exception, be converted into sugar under the influence of that animal diastase, in order to become fit for absorption and assimilation. But, says the author, what becomes of this sugar? It must participate in nutrition, and in order to do this it must suffer decomposition in the circulating fluids, for in the normal state it cannot be detected in any of the secretions. When it passes unaltered through the kidneys, it may be inferred that some powerful cause has prevented its decomposition, and thereby rendered it unfit for assimilation. This is, then, an abnormal and pathological occurrence which may be regarded as the consequence of the perturbation of another order of chemical phenomena; and this perturbation consists in a want of alkalinity in the fluids of the animal economy. Here the author, grounding himself on his former investigations relative to the digestion and assimilation of amyloid substances, draws the following inferences:—1. The alkalies normally contained in the blood and in the animal fluids are the principal agents of the digestion and the assimilation of saccharine and amyloid substances. 2. Starchy aliments are in all animals transformed into glucose by the agency of the animal diastase, whereby they become absorbable; this glucose, in order to become assimilable, is then transformed by the alkalies of the blood into new products, as kali-saccharic acid, formic acid, uric acid, &c., which bodies are all endowed with a very energetic disoxygenizing power, and probably destined to act as a counterpoise to the respiratory oxygenation. In a healthy subject, the usual alkalinity of the blood is amply sufficient

for the transformation of the saccharine matter, but if this alkalinity be deficient, the transformation cannot take place; the sugar, being then neither decomposed nor assimilated, spreads itself over the economy, becomes a foreign body, and is, as such, cast off, not only by the kidneys, but by all secreting surfaces, and then we have diabetes. The cause of this affection may therefore be traced to a defective assimilation of the sugar, through a want of alkalinity in the animal economy. Human blood is naturally alkaline: we constantly introduce into our system acid elements, which would eventually predominate if they were not counterbalanced by especial secretion—viz., the perspiration and urine. So that a healthy man has one kind of secretion always yielding an acid reaction—viz., the perspiration and urine, and another kind, with alkaline properties—viz., the saliva, tears, and feces. So long as these secretions retain their normal chemical nature, the due balance of acid and alkaline principles in the economy is kept up; if they all become acid, we, of course, conclude on a want of alkalinity, and *vice versa*. The former state may be brought on—1st, by the ingestion of acids themselves; 2d, by exclusively azotized food. Meats, owing to the albuminoid substances to be found in them, contain much sulphur and phosphorus, and those bodies generate sulphuric and phosphoric acids by their combustion within the economy. These agents get diffused through the fluids, saturate at first the alkaline bases they meet with, and at last predominate. 3d. The want of the perspiring action of the skin, which is intended to throw off acids from the economy. Thus I shall be able to show, says M. Mialhe, that by using means opposed to these three causes mentioned above, we can bring back the economy to its normal state, and excite in it a series of new phenomena. So that it appears possible—1st, to modify, as we please, the fluids effecting nutrition either in animals or vegetables, and obtain a proof of the reality of this modification by the examination of the secretions; 2d, to invert, by means of the food or medicines, the natural order of the assimilating functions, and thus give rise to new phenomena, which change the normal products of the organism; 3d, to control, on the other hand, the accidental disturbance of the organism, re-establish the integrity of its functions, and thus re-constitute life and health. By applying these consequences to the diabetic affection, the author proposes to restore the vitiated humors to their normal standard, and re-establish the natural order of the assimilating functions; by introducing into the economy the alkali which is wanting, and expelling the acids which predominate by the use of alkalies and sudorifics. When diabetes is produced by a prolonged ingestion of acid substances, unaccompanied by suppression of the perspiration or deep alterations of the organism, the cure by alkalies may, in some degree be instantaneous. He cites the case of a gentleman who exhibited all the symptoms of diabetes, seemingly brought on by an excess of acidulated drinks during the hot summer of 1847. Five drachms of bicarbonate of soda, with seventy-five grains of calcined magnesia, and two and a half bottles of Vichy water per diem, sufficed to remove all the symptoms in eight or ten days.

Now we are ready to do justice to M. Mialhe's indefatigable zeal in organo-chemical investigations; but it must be confessed, that a single case is far from having sufficient weight for establishing a new theory. The author has the foible of most laborers in the field of physiological chemistry. He will needs consider the organism as a regular laboratory; for him the stomach is a still, the liver a filter, the lungs a furnace, and the skin an evaporating apparatus, &c. MM. Martin, Solon, Bussy and Rayer, will report upon this paper, of which the above is but an abstract; they will inform us whether the proofs alleged are satisfactory, for hitherto we see but an ingenious grouping of assertions and deductions. We shall therefore recur to the subject, but cannot leave it without remarking with what facility and readiness M. Mialhe harmonizes chemical effect. For instance: when speaking of the new products resulting from the action of alkalies upon the sugar, he mentions that these products are highly disoxygenizing, and immediately adds, that they, according to all probability, serve as a counterpoise to the respiratory oxidation. This appears rather a hasty conclusion. Another passage, which is strongly indicative of the exclusiveness of the author's chemical views, is that wherein he mentions the development of sulphuric and phosphoric acids, attributed to the ingestion of phosphorus and sulphur in meat. These acids, according to him, gradually saturate the alkaline bases in the fluids, and finally predominate. Here, again, we have a chemical re-

action, which is simple and natural enough out of the body, assumed as taking place, just in the same way, in the mysterious recesses of our capillaries. Sir James Murray regards the human frame as a Leyden jar; Dr. Farkin, as a gascometer; M. Mialhe, as a laboratory! The humorists, solidists, mechanists, and chemists of old were hardly more wedded to peculiar views.—*London Lancet.*

## PHYSIOLOGY.

*On the Pancreatic Juice;* by M. Bernard.—Alimentary substances have been arranged by some recent chemists in four groups:—substances soluble by themselves and consequently absorbed directly by the veins and the digestive tube; amylaceous substances converted into sugar; fibrous matters requiring a special fermentation in order to become soluble; and fatty substances, evidently designed to pass into the chyle and giving it its most decided characters. The recent researches of MM. Bouchardat and Sanders, Mialhe, Bareswill and Bernard himself, have placed beyond doubt the existence of a ferment fitted to change fecula to sugar in some of the liquids which mixed with the aliment. They have shown that the gastric juice has for its primary object the digestion of azotized substances. It remained still to discover the agent operating in the formation of chyle properly so called. M. Bernard argues on the following grounds, suggested by experiments, that this remarkable function belongs to the pancreatic juice.

(1) The pancreatic juice, when pure and recently formed, emulsionates fats or oils with the greatest facility; the emulsion remains for a long time and the fatty bodies soon undergo a fermentation which separates the acids they contain.

(2.) The chyle begins to be collected in the chyloferous ducts about that part of the intestinal tube where the pancreatic juice is mixed with the alimentary matters.

(3.) When the pancreas are affected, the fatty substances contained in the aliment pass without change into the dejections.

The memoir of M. Bernard has been reported upon favorably by MM. Magendie, Milne Edwards and Dumas, a commission of the Academy of Sciences of Paris. (*L'Institut*, No. 791, Feb. 28, 1849.)

*The Intention of Hiccup.*—In the convulsive movement of hiccup, the diaphragm is depressed; the larynx is raised; and the glottis is closed. What would be the effects of these conditions? The depression of the diaphragm would tend to expand the cavity of the chest; but the glottis being closed, no air can enter the lungs. The two ends of the œsophagus are, however, still open, and if the hiccup be strong enough, air will enter the œsophagus at both ends. If a person will make a prolonged voluntary effort of the conditions which occur in hiccup, he will find a portion of air sucked, as it were, into the œsophagus, from the pharynx. Now, spasmodic hiccup is a reflex movement, excited, in general, by gaseous irritation of the stomach; under these conditions the hiccup will suck the air of the stomach into the lower extremity of the œsophagus. This, then, is the intention of hiccup—to pump off the air of the stomach. The movement of the hiccup sucks the gaseous contents of the stomach into the lower extremity of the œsophagus, and an inveterate action of the œsophagus propels them upwards, and discharges them at the pharynx.—*Proc. Med. and Surg. Jour.*

*Source of Sugar in the Animal Economy.*—Sugar is extensively distributed throughout the vegetable kingdom, but it exists also in animals. Vegetables do not find it ready made in the earth, but form it by some power of internal organization. Is it the same with animals? or is the sugar found in their bodies exclusively the product of their vegetable ingesta? This is the important question which it is our intention to submit to the test of experiment.

Sugar enters largely into the composition of the food of animals. The kinds of sugar are—1st, cane sugar, such as is found in the sugar-cane, beet-root, carrots, &c.; 2nd,

grape sugar, such as exists in grapes, and other saccharine fruits. Fecula should also be considered as saccharine matter, inasmuch as it is convertible into low sugar during the process of digestion; 3rd, sugar of milk, which is found in the milk of animals.

This is not the place to trace the distinctive characters of these forms of sugar, nor to determine the alternate changes which they undergo in order to become subservient to nutrition. I need only state, that as certain alimentary substances are known to furnish considerable quantities of sugar, we may consider them as the source of the saccharine matter which we discover in the blood or other animal fluids. It is admitted, that sugar is to be found in the healthy blood after the ingestion of sugar, or matters convertible into sugar, but chemical facts teach us, on the one hand, that starch is the only principle which is convertible into sugar; and, on the other hand, in the belief that the animal economy has not the power to originate a principle, but only to transform those which are presented by the vegetable kingdom, it has been denied that the animal organism can form sugar, and the only power recognized is that of destroying and eliminating it. The facts which will be developed in the following essay show us that such an opinion is not warranted by physiology.

*First Series of Experiments.*—It has been observed, that during the digestion of saccharine or amylaceous matter, the blood contains sugar, and it has thence been concluded that the sugar is furnished by the aliments. This result of experiment taken alone is exact, but the experiment itself is incomplete, and the conclusions therefore false, as will be seen.

*1st Exp.*—I injected thirty grains of starch dissolved in a pint of water, into the stomach of a rabbit which had eaten oats and carrots. Five hours after, the animal was destroyed in the usual way, and thirty grains of blood from the heart collected. After coagulation, sugar was distinctly found in the serum. The stomach and intestines contained sugar arising from the carrots and the transformation of the farina.

*2nd Exp.*—A strong dog was destroyed five hours after eating 300 grains of the jelly of starch. The serum of the blood taken from the heart contained a notable quantity of sugar. The contents of the stomach were acid and contained no sugar; those of the intestines were alkaline and strongly saccharine.

*3rd Exp.*—A dog ate plentifully of sheep's head, and was killed after seven hours. In the serum of the blood sugar was distinctly found. No sugar was found in intestinal canal.

*4th Exp.*—A dog was killed after fasting two days. Sugar was unequivocally found in the serum.

The above experiments were repeated several times, and always with the same results. The general fact established is readily seen,—viz., that sugar is constantly present in the blood of animals, whatever has been the nature of their food.

*Second Series.*—Whence is the sugar derived in the case of the animals fed on meat, and in that which had not eaten for two days previous to death? This is the question, for the solution of which fresh experiments are required. It may be fairly presumed that the sugar was not formed in the heart, but had been transported thither from some other parts of the body. To determine more exactly the locality of its formation, I performed the following experiments:—

*1st Exp.*—A large strong dog being killed seven hours after a hearty meal of cooked meat and bones, digestion was found to be in full operation, and the gastro-intestinal circulation and chyloferous ducts fully distended with their respective contents. I obtained,—1st, some blood from the junction of the splenic vein, with the vena portæ; 2nd, some chyle from the thoracic duct; 3rd, blood as before from the

cavities of the heart. I then carefully separated the contents of the stomach and bowels, and tested each separately for sugar with the subjoined results.

1. The alimentary matters of the stomach and small intestines had an acid reaction, and afforded no evidence of the presence of sugar.

2. The milky serum afforded by the coagulation of the chyle was also destitute of sugar.

3. The blood of the vena portæ being allowed to coagulate, the serum was slightly opalescent and alkaline; I distinctly ascertained the presence of a large quantity of sugar.

4. The blood from the heart also presented sugar, but in less abundance.

The experiment was repeated several times, and with always the same result, but without my being able to comprehend how the portal blood should contain so large a quantity of sugar, while none existed in the small intestines. Reflecting, however, that this matter must be derived from some neighboring viscus, I proceeded as follows:—Having quickly destroyed a dog which had some hours since fed on matters destitute of sugar or fecula, I opened the abdominal cavity, and placed ligatures,—1st, on the branches of the mesenteric veins, close to the small intestines; 2nd, on the splenic veins, close to the spleen; 3rd, on the pancreatic veins; 4th, on the trunk of the vena portæ as it entered the liver. I then collected blood from each of these sources, and examined it. 1. Sugar was not found in the blood of the intestines, nor in their contents. [The original states that sugar was found, but this is evidently an error of the press, as appears from the context.—*Trans.*] 2. Sugar was not present in the blood, either of the splenic or pancreatic veins. 3. The blood of the portal veins contained a large quantity of sugar, as did also the tissue of the liver itself.

It was thus made evident that the liver was the source of the saccharine matter. But it must be asked, how is it that sugar is found in the portal veins, for supposing it to be formed in the hepatic glandules, it should be carried into the general circulation by the hepatic veins, and not flow back into the portal branches. This reflux is, in my opinion, easy to be understood—for, in fact, the circulation in the porta is mainly effected by the pressure of the abdominal parietes during life; if, therefore, the pressure be removed as in opening the abdomen, there would immediately be a reflux from the absence of valves in the portal system. We have ascertained, by the above experiments, that sugar is found in the liver, and is carried into the general circulation by the blood of the hepatic veins, the reflux into the porta being accidental; but we regard this discovery to be so important, that we think it right to state the processes employed in the investigation, in order that others may confirm or confute our conclusions by following in our footsteps.

#### *Tests for Sugar in the liver itself.*

A portion of liver is to be beaten in a mortar, and then boiled in a small quantity of water, and filtered. The filtered liquid possesses all the properties of a saccharine fluid. It becomes darker on boiling with liquor potassæ, and it reduces the double tartrate of potass and copper. If yeast be added at a certain temperature, fermentation ensues; if the fluid be distilled after fermentation, alcohol may be obtained. The attempt was made to procure sugar in substance by operating on large quantities of liver, but although a fluid of syrupy consistence was obtained, crystallization did not take place. The recognition of sugar in the blood is a very simple affair; the blood is allowed to coagulate, and the serum placed in a tube furnished with a stopper; to this is added a sixteenth in bulk of the tartrate of copper and potash, and boiled, when a quantity of the salt is reduced, proportionate to that of the sugar present. By this process the smallest traces of saccharine matter may be detected. Both in this test, as well as that by fermentation, it is necessary

to operate on the serum while it is fresh, as sugar is rapidly decomposed spontaneously.

We have now traced the sugar of animals to the liver, but we have further to determine whence it is derived. Two suppositions may be entertained; either it results directly from a transformation of certain elements of the liver, or it is derived from the food. It may be said, in fact, that the animals which had been fed exclusively on animal food, or starved, might have eaten fecula or saccharine food the few days previously, and that the sugar thence derived had accumulated and been detained in the liver; and it might be added in support of this view, that the liver is known to retain arsenic and other poisons for a length of time. Without actually denying this view, the following experiments would seem to oppose it:—

1st *Exp.*—A full-grown dog was starved for eight days, and then fed abundantly on cooked meat for eleven days; after this he was destroyed. The blood contained an abundance of sugar. This experiment was repeated several times, and certainly it would appear probable, that sugar derived from food, given antecedently, would have been eliminated after a lapse of nineteen days.

2nd *Exp.*—A rabbit, after a meal of carrots, was subjected to the division of the pneumo-gastric nerves. He was found dead seventeen hours after. *No sugar was found in the blood or liver.* This experiment was repeated with similar results. In both animals the bile, which is generally alkaline, was found to have a distinctly acid reaction. This effect of division of the pneumo-gastric nerves is remarkable. As a further proof that sugar is found independently of food, I may state that I have found it in large quantity in fetal calves. From the above facts, the author draws the following conclusions:—

1. That diabetic sugar is a normal ingredient in the blood and liver of animals.

2. That the formation of sugar takes place in the liver, and independently of saccharine or feculent food.

3. That this formation of sugar commences before birth.

4. That it is allied to a state of integrity of the pneumo-gastric nerves.—*Dr. Bernard in Archives Gén. and Provincial Journal.*

## MEDICAL JURISPRUDENCE.

*Singular Case of Insanity.*—The correspondent of the London Standard of Freedom gives an account of one of the most singular trials before the Military Tribunal which has ever occupied public attention. One Serjeant Bertrand was accused of violating the tombs of the dead. An immense auditory, embracing some of the first people in France, many of the most distinguished medical men of Europe, and several females, were collected. A more interesting, mild, and gentle being, has seldom appeared at a criminal bar.—He, without the slightest hesitation, acknowledged that, borne on by an irresistible fury, he had rushed to the cemeteries, dragged from their coffins the lately-buried bodies, beat them with tremendous violence, and tore out from the carcases the internal portions; and, from what was stated by the physician, to whom he had still more candidly confessed his enormities, it is not unlikely that he feasted on these mutilated remains, and committed horrors at which humanity shudders. Some scientific remarks were elicited from the medical men, which led to the conviction that the man was insane; indeed, there could be but little doubt. The military law could only inflict a punishment on him, when found guilty, of a year's imprisonment.

The Standard of Freedom thus notices this horrible creature more at length:

“The trial which took place in Paris, and to which allusion has been made by our French correspondent, of the serjeant who tore bodies from their graves for the purpose of mutilating them, has produced a great sensation throughout the medical and legal world. The tribunal before which he was tried, being entirely composed of military men, was incapable of eliciting those truths which are useful to society, and upon the investigation of which, so much depends.—That the unfortunate man was insane there can be little doubt, but how far he was responsible for the horrible acts he committed we are unable to judge. There are upon record in our courts of law several instances of appalling offences, which have been looked upon as the acts of lunatics; but those who have had these fearful impulses have been silent, moody, gloomy creatures, upon whose brow the mark of Cain has been visible.

“In this instance the perpetrator of crimes before us is apparently of a gentle and kindly nature; educated originally for the church, he was superior to most of the persons by whom he was surrounded, and was placed by his officers in a situation demanding high qualifications. Without any feeling beyond an irresistible propensity, he sallied in the dead of the night from his quarters, which were sometimes so guarded that it required the utmost cunning to get out of them. He scaled the highest walls, even when he knew that there were placed instruments of a deadly kind to prevent him, and, having reached a grave, he dragged out its loathsome tenant, beat it, mutilated it, and tore out its intestines. Though not aware, according to his own confession of the fact, he must have become a cannibal, for the marks of his teeth were plainly discernible on bodies, portions of which were missing. There were other acts committed on female frames, to which allusion can scarcely be made. It is evident that he marked out, wherever he had an opportunity, the corpses of young females in preference to all others. On no occasion does he seem to have taken away with him any portion of the clothes or the little memorials which it is not uncommon in France to bury with the dead. He was at length punished most fearfully for his atrocities. A machine, constructed so as to discharge numerous missiles, was placed in one of the cemeteries which he had been accustomed to visit. He received from it a vast number of wounds, and was compelled to take refuge in an hospital, having contrived to get off from the spot. There the singular nature of his injuries, and the imperfect story he related to account for them, led to suspicions, which were at length confirmed by his own confession to the physician who had charge of him. He asserted on his trial that he was perfectly cured of his propensity, but seemed to have no proportionate idea of its enormity. He stated that whilst in the hospital he had for the first time seen death in its own shape, and that it had produced within him emotions which would in future prevent the perpetration of similar acts. There seemed to be neither imbecility nor that moral insanity which the law allows to be a sufficient reason for suspending its punishments, and confining the individual lest he should be guilty of further deeds of turpitude. He spoke as if he felt that he had been under no evil influence, and had no premonitory symptoms of mental delusion. He had no motive for his conduct, no inducement but an instinctive impulse which became irresistible. Not yet recovered from the wounds that were inflicted upon him, he entered the hall leaning on his crutches, looking around him with calmness and collectedness, he seemed to expect to be an object of sympathy, and never shrunk back from the intense gaze which was directed upon him. He listened to his sentence with the utmost calmness, and every one who was present heard with astonishment that all that the law could do to punish him for the past, or to protect society for the future, was to pronounce a year's imprisonment?”

*Homœopathy and Cholera.*—We copy the following because we see some of these impostors endeavoring to turn cholera to account for advertisement; for certain are we the rogues will never venture to subject their trick to any such test.—*Ed. Dublin Medical Press.*—“Dr. Guillot, attached to the Salpêtrière, annoyed at the little success his treatment of cholera was meeting with, and staggered by the high-sounding promises of the adherents of homœopathy, lately gave one of the latter six beds in the above named establishment, the patients to be treated homœopathically. Hahnemann's follower immediately set to work, and began to exhibit, first globules of arsenic, then globules of bryony, and lastly of charcoal. But alas for the poor patient! out of 7 thus treated, not one recovered!! Of course the homœopathic practitioner was obliged to give up; but he cheered himself with the belief, that after running through the whole materia medica the true treatment must at last be found.—Similar trials have been made at the Hôpital St. Louis, with pretty well the same results. These facts will be a warning to those who would be inclined to give faith to the magnificent promises of homœopathsists.

*Cholera in New-York, and its progress in the United States.*—In presenting our readers with an account of the epidemic at present existing in this city, we shall confine our pen to a simple record of the facts which have accompanied its rise and progress thus far. Those who have read the carefully prepared and valuable paper of Dr. Sterling, in the original department of this number, will remember that it is there stated that a second visitation of the disease occurred in the first week of April, at the Public Stores, Quarantine, Staten Island; from this date to the 30th of May there occurred forty-three deaths, and during this period twelve only were brought on shore at Quarantine sick with cholera. From a private communication, prepared and sent us, at our request, by Dr. F. Harriot, one of the physicians of the City Dispensary, and under whose cognizance and care the first seven cases in this city occurred, we learn that, on Friday, 11th May, James Gilligan, an Irish laborer, residing in the rear basement of No. 20, Orange Street, (a part of the “Five Points,”) sickened the previous night with vomiting and purging, attended with cramps: the discharges were represented to have been of a dark color. Being exceedingly intemperate in his habits, and having indulged freely in drink, his sickness was attributed to this circumstance, and he was treated accordingly. On the 12th he had so far improved that he was considered convalescing. On Monday, (the 14th,) Dr. H. learned that two women living in the same cellar had sickened late in the evening of the 12th, in a similar manner. On again visiting the place, he found the two women and his previous patient (Gilligan), presenting all the appearances of the stage of collapse of cholera. Their situation was truly deplorable—lying on a few filthy rags, on the half-decayed floor of a miserably damp and dark basement: the odour on entering the room was disgusting in the extreme. The symptoms which these cases presented were as follows: Vomiting and purging of a fluid resembling in a striking manner, rice-water; violent cramps; cold, corrugated and blue skin, covered with a thick, clammy perspiration; sunken eyes; pinched and sharpened visage; a cold and lead-colored tongue; cold breath, and a scarcely perceptible pulse. Two of the cases died in a few hours. On the afternoon of the 14th a fourth case occurred: this patient died early the next morning. On Tuesday, (the 15th,) the resident physician of the city, Dr. Geer, was notified of the foregoing facts, who immediately visited the place, and reported to the Board of Health. On the following day, (the 16th,) the Board of Health convened, and a building in Anthony, near Centre Street, was seized upon for a temporary hospital, and Dr. William P. Buel appointed resident



physician to the same. On the 16th Dr. Harriot reported three new cases, all of whom sickened the previous night; thus making seven cases and three deaths in all up to this date, from 20, Orange Street. On the 17th several new cases occurred; these, together with the previous cases that were still living, were removed to the temporary hospital. Of the new cases, two were not residents of No. 20, but of the immediate neighborhood, and who had attended there the "wake" of the first case. From the 11th, when the first case sickened, to the 18th, eleven cases had occurred, of whom six died. On the 19th the Sanitary Committee of the Board of Health reported that, for the forty-eight hours previous, no new case of cholera had occurred. On the 21st two new cases were reported; both fatal. On the 22d four new cases: one fatal. On the 23d the Sanitary Committee reported that no new cases and no death had occurred in the city since the last report. The resident physician also reported that the cases which had hitherto occurred were entirely sporadic in their character, and that the disease had not as yet assumed an epidemic form. From inquiry, however, we learned that there were, on the morning of the 23d, two deaths, and that the patients were brought in from the immediate neighborhood where the first cases occurred. On the 24th one case was reported, which proved fatal. On the 25th two new cases and one death. All these, as well as the cases thus far, were from the original nidus, No 20 Orange Street, or its immediate neighborhood, and who had been directly or indirectly in communication with the first seven cases which occurred at this place. On the 26th, however, the Sanitary Committee reported two cases and one death as having occurred (on the 25th) at No. 10, Mulberry Street. They were removed to the Centre Street Hospital, under charge of Dr. Buel. From this time cases continued to occur in different parts of the city, apparently without any connection with the previous cases. On the 8th of June the public school-house in William Street, near Duane, was seized upon by the Board of Health; and opened, under the care of Dr. Alex. F. Vache, on the 9th, for the reception of patients. The following is a tabular synopsis of the official reports of the Sanitary Committee of the Board of Health, up to the 30th of June, including the cases up to the 26th of May. Total number up to

Street; although, for a number of days afterwards, a direct communication could easily be traced between the cases then occurring.

On the 26th of May a fatal case (the first) was reported to have occurred in Main Street, Brooklyn, L. I. opposite New-York. On the 29th the Board of Health of that city reported one case, which proved fatal in a few hours. The following is a tabular synopsis of the cases officially reported by the Board of Health from the 1st to the 29th of June, including those which had previously occurred. Total number up to

Date.			Cases.	Deaths.	Date.			Cases.	Deaths.	Date.			Cases.	Deaths.
May	31	2	2	June	10	0	0	June	20	3	3			
June	1	2	1	"	11	2	1	"	21	5	3			
"	2	1	2	"	12	2	0	"	22	0	0			
"	3	0	0	"	13	2	1	"	23	2	1			
"	4	4	2	"	14	2	1	"	24	0	0			
"	5	4	2	"	15	1	1	"	25	5	2			
"	6	2	2	"	16	0	0	"	26	6	3			
"	7	3	1	"	17	0	0	"	27	3	1			
"	8	0	0	"	18	5	3	"	28	4	2			
"	9	4	2	"	19	3	3	"	29	6	2			

Total number of cases reported 74; deaths 40.

On the 29th of May a case was reported to have occurred at Williamsburgh, opposite New-York; and on the 1st of June it was announced that five cases and three deaths had already occurred. Two fatal cases were reported on the 4th of June at Jamaica, L. I. On the 22d of May eight cases were announced in Philadelphia, and the same day three cases were reported to have occurred in Baltimore. On the 23d the Board of Health of the former city made an official report, in which they state that no case of malignant cholera had come to their notice. On the 30th, however, they report three cases of cholera, all of which proved fatal; and on the 31st two fatal cases were reported in the latter. The Board of Health of Norfolk Va. reported, on the 30th of May, that, for the week ending the 29th instant there had been twelve cases and four deaths. On the 30th of May cases were reported to have occurred at Richmond, Va. and the legislature of that state, in the midst of the excitement, proposed to adjourn to the White Sulphur Springs. The physicians of that city, however, assured the public that, up to that date, no case of "Asiatic cholera" had occurred in that city. On the 31st, however, three deaths from cholera were reported. On the 5th of June the Board of Health officially reported five new cases and four deaths for the forty-eight hours ending on the evening of the 4th. The legislature now adjourned to Fariquer Springs.

At Boston, (Mass.) on the 4th of June, three cases—two of them fatal—were reported to have occurred on board the bark Argyle, just arrived from Scotland; and on the 5th another fatal case was reported. Since that time cases have occurred in that city, and in several other of the New England cities and villages. On the 7th of June five cases were reported to have occurred in Buffalo up to that date; two were indigenous: the remaining number were attacked on board of vessels, and were from places where the disease was prevalent. Cases have also occurred in Albany, Troy, and along the line of the Erie canal. At Chicago, on the 2d of May, a case was reported to have occurred, and on the 14th the Board of Health published a report, in which

Date.			Cases.	Deaths.	Date.			Cases.	Deaths.	Date.			Cases.	Deaths.
May	26	20	11	June	7	38	19	June	19	41	10			
"	27	0	1	"	8	26	12	"	20	30	14			
"	28	0	0	"	9	40	19	"	21	26	14			
"	29	8	4	"	10	16	10	"	22	38	16			
"	30	7	2	"	11	24	12	"	23	40	21			
"	31	8	2	"	12	36	19	"	24	38	21			
June	1	8	4	"	13	44	14	"	25	47	25			
"	2	13	7	"	14	38	16	"	26	73	38			
"	3	25	11	"	15	27	14	"	27	43	29			
"	4	23	9	"	16	27	15	"	28	63	29			
"	5	39	11	"	17	26	18	"	29	39	18			
"	6	60	11	"	18	42	17	"	30	88	26			

Thus it will be seen that the whole number of cases officially reported by the Board of Health up to June 30th was 1158, and that the whole number of deaths was 519. We have not learned that any direct communication could be traced between the cases that occurred at the Public Stores at Quarantine, Staten Island, during the first week of April or afterwards, and those that first occurred at No. 20, Orange

\* Owing to the absence of the Resident Physician, Dr. Geer, there was no report submitted to the Committee this day.

† On this and the following Sundays, marked with a †, there was no report from the Board of Health. The cases, therefore, are included in the following Monday's report.

they state that, since the 2d instant, twenty cases and twelve deaths have occurred, principally among the foreign residents and the transient population.

The disease continues to prevail throughout the Mississippi Valley. On many of the plantations the mortality has been severe. To the north—in Indiana, Illinois, &c. It has extended; and in the south-west—in Texas—is still raging severely: It has re-appeared in New Orleans and Cincinnati with increased virulence. At St. Louis the disease is producing terrible havoc. With a population of about sixty-five thousand, just before it broke out, the deaths now exceed one hundred per day. On a future occasion, when our data shall have been more matured, we hope to lay before our readers a more detailed and accurate account of the progress and treatment of this singular epidemic.—*New-York Journal of Medicine.*

*To our Subscribers.*—A very large amount is now due this Journal from arrears of subscription. Nothing is more unpleasant than to be obliged to remind our friends of their delinquencies; but one thing is clear, that unless the subscriptions to the Journal are more punctually received, it will be an impossibility for it longer to continue. We, therefore, earnestly request our subscribers to remit to the office, per post, the amounts for which they are severally indebted, and to do it at once, that Mr. Becket may be in funds as speedily as possible to effect his arrangements.

*To our Readers.*—Our readers must excuse the tardy appearance of this number of the Journal. Our professional engagements have been so onerous, as to entirely preclude that attention to it which it should have received at an earlier period. To the profession, we are satisfied that this apology will be sufficient.

THE  
**British American Journal.**

MONTREAL, AUGUST 10, 1849.

THE CHOLERA IN CANADA.

Our predictions have been realized, the dreaded scourge has visited us, and since our last number went to press, has numbered its thousands in the Province, and appears from all accounts to be spreading. We give the following statistics of the progress of the disease, and with reference to this city we may observe, that we are satisfied that at least 19 deaths had occurred before the period specified in the commencement of the report :

RETURNS OF INTERMENTS IN THE CITY OF MONTREAL FROM 2ND JULY, 1849, TO 2ND AUGUST, 1849 :

From Noon.	To Noon.	Total deaths.				From Cholera				Remarks.
		Catholics.	Protestants.	Pointe St. Charles.	Total.	Catholics.	Protestants.	Pointe St. Charles.	Total.	
1849.	1849.									
July .. 2	July ... 9	49	21	0	70	10	8	0	18	Seven days.
" .. 9	" ... 14	95	25	9	129	30	8	9	47	Five days.
" .. 14	" ... 16	56	13	2	71	36	12	2	50	
" .. 16	" ... 17	42	20	1	63	13	17	1	31	
" .. 17	" ... 18	27	9	1	37	13	8	1	22	
" .. 18	" ... 19	20	6	3	29	10	5	3	18	
" .. 19	" ... 20	34	4	0	38	15	2	0	17	
" .. 20	" ... 21	21	10	1	32	10	8	1	19	
" .. 21	" ... 22	22	9	1	32	15	8	1	24	
" .. 22	" ... 23	23	7	2	32	17	5	2	24	
" .. 23	" ... 24	36	12	1	49	19	8	1	28	
" .. 24	" ... 25	29	11	1	41	19	11	1	31	
" .. 25	" ... 26	26	7	2	35	17	5	2	24	
" .. 26	" ... 27	26	8	0	34	16	4	0	20	
" .. 27	" ... 28	15	5	3	23	3	3	3	9	
" .. 28	" ... 29	24	9	1	34	7	6	1	14	
" .. 29	" ... 30	30	23	1	54	9	1	0	10	
" .. 30	" ... 31	26	6	0	32	11	0	0	11	
" .. 31	Aug ... 1	13	4	0	17	3	2	0	5	
Aug ... 1	" ... 2	13	4	0	17	5	3	0	8	
" ... 2	" ... 3	13	6	1	20	5	4	1	9	
Total .....		859				439				

In Quebec the disease has been much more virulent, and has expended itself, as we are informed, chiefly at the Cove, one of the most filthy districts of the city. To July 31st, at noon, the total number of deaths from Cholera was . . . . . 671

In Toronto the total number of cases up to July 30 was . . . . . 209  
And deaths . . . . . 119  
In Hamilton, up to July 26, there had been 6 deaths.  
In Lachine, up to " 24, " " 2 "  
In Cobourg, up to " 31, " " 1 "  
In Kingston, up to Aug. 1, " " 32 "

The disease has also, we are informed, appeared at St. Vincent de Paul, Berthier, Chambly, Henryville, Missisquoi Bay, Chateaugay, and Beauharnois; and has proved peculiarly malignant at the two latter places. In Kingston the disease has evidently lulled, no fresh cases having occurred; we have heard, however, of a few new cases, and probably by this time the disease is again on the increase.

From information furnished by Dr. David, the Secretary of the Board of Health, we discover that the disease commenced in the following places in the following order :—

Quebec . . . . . July 4.  
Kingston . . . . . " 7.  
Toronto . . . . . " 6.  
Hamilton . . . . . " 18.  
Lachine . . . . . " 23.

The information furnished to the Board of Health must be, therefore, erroneous, for Dr. Yates' letter, published in our original department, clearly shows that the disease existed in Kingston, as early as April 30th; and we are, moreover, confident that cases of it, proving fatal, occurred in this city, about the 15th June. We alluded to these cases in our last issue.

The disease is very prevalent in the chief cities of the adjoining republic. It exists in New-York, New Orleans, Cincinnati, Buffalo, Chicago, St. Louis, Richmond, Baltimore, Philadelphia, &c. At Baton Rouge, La., at a place of Mrs. Minor's, it has carried off 100 out of a population of 220. At Natching, Memphis, and Nashville, it has also appeared. It exists at Lexington, Ky., and Albany, and a few cases have also appeared at Boston. One city has been visited in an especial manner, we allude to Sandusky, on Lake Erie—out of a population not exceeding 3000, not more than 700 now remain. The deaths for the two days preceding July 30, amounted, in that city, to 100. This city is badly drained, as we are informed, and is, moreover, located on alluvial soil, clearly shewing the predilection of the disease, if we may so speak, to wet and marshy localities.

The disease has, undoubtedly, travelled eastward; and Kingston has, at this, its third visitation, proved the starting point, from which it has radiated in all directions. Not a single case has yet occurred at Grosse Isle. The Quarantine Station has not, therefore, excluded it.

### THE MEDICO-CHIRURGICAL SOCIETY.

At a meeting of this Society, held on Saturday evening, 8th inst., the following resolution was adopted, in preference to directions of their own, to the public for their guidance during the existence of the prevailing epidemic:—

Moved by Dr. BADGLEY, seconded by Dr. SUTHERLAND:

1st.—That the members of the Medico-Chirurgical Society, are happy in being able to congratulate their fellow citizens on the comparatively small number of cases which have occurred in this city, since the commencement of the epidemic; that they beg to express their opinion in approval of the directions issued by the Central Board of Health, with regard to the observance of cleanliness, temperance, avoidance of crude, and indigestible food, &c., &c.; that they concur in the opinion of the said Board, as to the essentially non-contagious nature of the disease; and that they beg to reprobate, in the strongest terms, the indiscriminate use by individuals of the various nostrums advertised in the public newspapers; as preventives against or curatives for this malady; the adoption of such means being, in most instances, the cause of the loss of much valuable time and opportunity for successfully combating it, when professional assistance is really sought.

Moved by Dr. BADGLEY, seconded by Dr. ARNOLDI, and resolved:

2nd,—That the foregoing resolution be published in the newspapers of the city.

JAS. CRAWFORD, M.D., Chairman.  
HECTOR PELTIER, M.D., Secretary.

In carefully examining the above resolution, our

readers cannot fail in observing, that it attributes to the Central Board of Health, the *entertainment of an* opinion on the contagiousness or non-contagiousness of the disease in question. We feel particularly obliged to the Society for the information it has afforded to us, which, we must confess, we were unable, of ourselves to glean from any of the published manifestoes of the Board; an opinion, too, in which its members, who were present, concurred. Now, a disease, (if we understand rightly the English language) which is "essentially non-contagious," is not contagious under *any circumstances*: and we therefore ask (in our simplicity, it is true, and with due deference to the collective wisdom assembled on the occasion), why the Board of Health, especially the medical *minority* of it, have insisted upon the purification of the bedding, clothing, &c., of cholera patients? why they insist upon their being aired and "even heated in an oven?" why they enjoin the *use of disinfectants*, and why they order chloride of lime, and lime to the amount of *twenty pounds*, to be placed in the coffins? &c. &c. We like consistency in every thing, and we certainly think that the Medico-Chirurgical Society has forgotten its position, and most egregiously stultified itself. We differ *toto cælo* from the Society, in the opinion of the disease advanced by them, and we feel perfectly satisfied that they stand alone, among the medical associations of the day, in the entertainment of such an opinion. The Society has been beautifully castigated by some of the local papers, who have not failed to detect the discrepancy, and richly have they deserved it. We hope that on another occasion they will act with more judgment.

### POLICE.

COURT OF SPECIAL SESSIONS, 21ST DAY OF JULY, 1849.

Present:—Col. Ermatinger,  
Capt. Wetherall,  
T. D. Lacroix, Esq.

The College of Physicians and Surgeons of Lower Canada,  
Prosecutors,

vs  
Thomas Hooker, Defendant.

(Reported for the British American Journal.)

This was a prosecution against the Defendant for having practised physic without a license. Mr. M'Donnell and Mr. Fleming, on behalf of the Defendant, pleaded that the College had no power to claim the penalties; but this plea was dismissed, as an Act of the last Session gives the College this power in express terms. A plea of "not guilty," was then recorded.

The first witness, deposed in substance, as follows:—"I called at the Defendant's shop, in St. Paul Street, accompanied by the other witness now present. The Defendant was in the shop; I asked him, if he was Mr. Hooker, the Doctor; he said he was. I then told him I was unwell and could not work—that I felt very giddy whenever I stooped down. The Defendant examined my tongue, and made up some mixture in a black bottle, which he gave me to take in doses, saying it would do me a great deal of good. I paid him his charge, which was 1s 6d. I left, telling the Defendant I would call back and see him, if his medicine did

me any good. Two days after, I called back, accompanied by the other witness; saw the Defendant, who asked me how I was. I told him I was much better; to which he answered, "I see by your looks you are better," although I had taken none of his medicine. The other witness then complained of a *mal de cœur*; the Defendant made up some liquid medicine in a glass, and handed it to him to take, saying it would do him good. The witness first refused, expecting to have the same chance as myself of taking home his medicine. He, however, took the dose, and paid 4d for it."

Cross-examined.—I was not ill. The illness was feigned on my part. I was employed by Mr. Horn, who gives me 15s a-week. He pays me, and the College gives him money to do so. I have no interest in the suit. I have been paid for my time up to this week, which will end on Saturday.

The other witness was then examined and fully corroborated the testimony of the first witness.

The Defendants then called Mr. Horn as a witness for the Defence, in the expectation of disproving the testimony of the other witnesses, as to the fact of their employment. In this they failed. The purport of his evidence was, that he had been requested by the College to bring up unlicensed practitioners, and that he had received a sum of £7 10s to meet the expense of so doing, part of which was paying men by the week for their services.

Mr. Fleming then addressed the Court, and contended that the offence was not proved. That although there was evidence of money having been paid for the medicines given, yet this was not the offence,—the evidence should have gone further and proved what portion of the charge, if any, was made for the Defendant's opinion and advice, and that the Court could not say what part of the 4d was for the advice and opinion of the Defendant.

Mr. Edward Carter, as Counsel for the College, contended in reply,—that the evidence clearly proved the offence as laid,—that of practising physic without a license. This was not the case assumed by the learned counsel, of the sale and delivery of a drug, and the paying of its value—neither does the nature of the evidence shew that such was intended to be proved. All the Court had to determine was,—did the Defendant affect to know the malady of the witnesses, and prescribe for its treatment? This was the gist of the offence and was distinctly proved. The delivery of medicine and receiving pay for it, was merely auxiliary evidence, and rendering more conclusive, if necessary, the fact of the Defendant having "practised physic." It was therefore unnecessary for him to prove what portion of the 4d was for the advice and opinion of the Defendant. The Defendant's counsel would not contend that their client was an extortioner, and assuming then that he only charged the value of his services, the Court would probably come to the same conclusion that he (Mr. Carter) had come to, viz., that the Defendant charged a 1d for the dose, and 3d for his advice, which, no doubt, was all that it was worth. [Laughter.]

The Magistrates conferred together for a few moments, and were unanimous in convicting the Defendant for the two offences laid, and to the payment of £10 and costs.

COURT OF WEEKLY SESSIONS, SATURDAY, 4TH AUGUST, 1849.

Present:—W. K. M'Cord, Esq.,  
William Ermatinger, Esq.

The College of Physicians and Surgeons of Lower Canada,  
Prosecutors,

vs

William E. Bowman, of Montreal, Trader, Defendant.

(Reported for the British American Journal.)

This prosecution was brought against the Defendant for having practised physic without a license. A preliminary objection taken to the return of the constable on the summons, was dismissed by the Court,—declaring that the defect, if any, was cured by the appearance of the party. Mr. Bedwell, for the Defendant, having pleaded "not guilty," two witnesses were examined by the prosecuting counsel Mr. E. Carter, whose evidence was as follows:—

"On Monday, the 9th July, I went to the Defendant's store in McGill Street, I asked for Dr. Bowman; the Defendant said he was the person; I then complained to him that I was sick, and could not work; that the pain was in my chest accompanied by giddiness. The Defendant gave me a box of pills, telling he how many to take, and that they would do me good. His charge was

1s 3d,—I gave him 1s, and called back on Wednesday and gave him the balance, three-pence. The Defendant asked me if I was better, I told him that I was. The other witness was with me on both occasions. On the second occasion, the other witness complained of pain and looseness of bowels. The Defendant immediately said that witness had Cholera, and that he might be a dead man before he reached home. He gave him a small bottle of medicine, from which the Defendant made the witness take 18 drops in his shop,—at the same time telling him to be cautious. The Defendant's charge was 9d, which was paid."

Cross-Examined.—Do not know what kind of pills I got. They were in a box, wrapped up and sealed.

The second witness corroborated the statement made by the first witness, and stated in addition thereto, the effect which the 18 drops of medicine had produced upon him.

Mr. E. Carter then closed his case for the prosecution. Mr. M'Cord immediately intimated to the Defendant's Counsel that the case was not made out, and that he need not go on his defence.

Mr. E. Carter, claimed the right to be heard before the Court gave its judgment.

Mr. M'Cord—to Mr. E. Carter—"I think when the Court has given its opinion, Counsel should be silent—it is 'indelicat' for Counsel to think of contending against the opinion of the Court, once expressed."

Mr. E. Carter—"I have a right to be heard, and I claim that right. If I stand in the position of appearing 'indelicat' to the Court, in contending against an expressed opinion of the Court, it is not my fault; the Court has placed me in that position. If delicacy be due by Counsel to the Court,—there is also some degree of delicacy due by the Court to Counsel. I had no reason to expect the Court would decide against me without a hearing. I had a right to expect some intimation from the Court of the ground upon which the Court was against me, and to hear me upon it. But, as it is, the only expression of opinion is, that the case is not proved. In my opinion, it is proved, as clearly as any point can be proved,—and at the risk of being considered 'indelicat,' I must discharge my duty to my clients, which, to me, is paramount to all other considerations."

Mr. Ermatinger—We shall hear you.

Mr. E. Carter then went into a lengthy argument, shewing first what the offence was as described by law, viz.—"Practising physic" without a license, and that the evidence distinctly and clearly made out the charge. That the exception made by law in favor of retailers selling patent medicines, could not be invoked by the Defendant. Supposing that they were patent medicines, which was not proved, the defendant should have pleaded specially the fact. But it was not pleaded nor proved. He contended also that supposing, for argument's sake, they were patent medicines, the Defendant was equally liable for, whatever might be his right to sell, he had no right to prescribe them; and that in certain diseases, although patent medicines, if misapplied they might prove as fatal as any other drug injudiciously used. The Defendant could not enquire into the malady of a patient and prescribe for his cure a patent medicine, as this was in reality "practising physic." The quality of the medicine was nothing; it need not be proved to have been a drug; the pills might have been bread-pills; the Cholera dose might have been colored water, still the defendant was liable. The object of the law was to punish individuals, who, unauthorized by a license, affected to know the disease of a patient, and prescribed for its treatment. This, he contended, the Defendant did do; he dosed the last witness in his shop; told him he had Cholera; told him of his danger; told him he might be a dead man before he reached his home. Mr. Carter concluded by saying that he was at a loss to know what the Court's opinion was of "practising physic," or the evidence which they thought was wanting. In his opinion none was wanting, and that the case was as clear as day light.

Mr. M'Cord—We consider the case not proved; it was only a sale of medicines. Action dismissed.]

N.B.—Mr. Ermatinger coincided in this judgment without giving any reason, notwithstanding Mr. Carter told him in the argument that the evidence in this case was precisely similar to that in Hooker's case, where he (Col. Ermatinger) gave judgment in conjunction with Mr. Lacroix, one of the oldest lawyers at the bar, against Hooker; and where Mr. Lacroix expressed his opi-

nion that the evidence was as clear as noon-day, and was conclusive of the legal liability of the Defendant.

It will be seen by the two foregoing Law Reports, that the College has commenced prosecutions for the practice of medicine contrary to the provisions of the Act of Parliament; and the case of the College *vs.* Hooker, may be taken as a precedent for future actions. Other actions will speedily follow in this city; and if we could be assured that the practice of the empirics was such as could conduce to the substantial benefit of the parties who place themselves under it, we would regret seeing any such prosecutions attempted. From what we know, and from what we have seen, we are compelled to conclude that the sooner the public is protected the better. On such grounds, we therefore regret the non-conviction of Mr. Bowman, a druggist of this city. If the evidence against Hooker was conclusive of his having violated the statute, the evidence against Bowman, being of precisely the same character, was equally conclusive, and should have been attended with the same result. Mr. Bowman is a licensed Apothecary, Chemist and Druggist, for the Province of Lower Canada, and by such license is empowered to vend drugs and medicines, and to prepare physicians' prescriptions; the fact of his holding the licence being a guarantee of his capability of fully discharging the latter, and by far the most important, duty. But beyond these respects, his duty and his powers cease. The question now arises, what constitutes the "practice of physic, surgery, or midwifery," in the meaning of the Act? Is it the mere selling of what are called Sir Astley Cooper's pills, or Brandreth's pills? No; far from it. This is the apothecary's legitimate province, if there are to be found fools willing to act upon their own opinion, and swallow the one or the other. What we consider to be the "practice of physic, surgery, or midwifery," according to the Act, consists in the application of remedial agents to the alleviation of disease manifesting itself by peculiar symptoms; and for this the apothecary is no more properly qualified or educated than is any ordinary merchant in his counting house, who deals in epsom salts, glauber salts, or castor oil. The one who deals in wholesale might claim a privilege, on such grounds, equal with those who deal in retail; and physicians may be manufactured, without difficulty, ignorant of anatomy, physiology, and therapeutics, by a license, which, according to the decision in Mr. Bowman's case, places them on a full level with the regularly-educated physicians of the country, who, under like circumstances, can do no more. Irrespective of the blunder which Mr. Bowman committed in regard to the disease of his supposed Cholera patient, he has most manifestly infringed both the spirit and letter of the Act; and if, by a singular perversion of judgment on the part of the Court, which did not understand what the practice of medicine meant, he has been permitted to escape the infliction of what we certainly conceive would have been a just punishment, we hope he will become more wise, prudent, and cautious for the future, and restrict himself to the exercise of those duties which are legitimately his province.

While upon this subject, we would earnestly recom-

mend to our country friends, in whose neighbourhood parties are practising illegally, to advise Dr. David, the Secretary of the College, in post-paid letters, of their whereabouts. The College is resolved to put down empiricism; but it must know when and where to act.

*Homœopathy and Cholera.*—It was our intention to have offered some remarks on the Homœopathic treatment of Cholera, in this city, and upon the very subject which has been so adroitly handled by the editor of the *New York Annalist*. In lieu of any observations of our own, we quote those of our able contemporary. We would only remark, that the exhibition of camphor in the drop doses of the ordinary tincture, as practised by the Homœopaths of this city, is a practical refutation of one of Hahnemann's most important dogmas, the increased and increasing potency of medicines from their high dilutions or attenuations. There is something good in Nazareth still, when the bitterest opponents of our practice do not scruple to resort to it, when they find their own infinitesimal efforts abortive.

Since the appearance of Cholera in this city, our homœopathic friends have laudably endeavored to do their part in enlightening the community in regard to its prevention and cure. Hence we have had through the daily papers, various private and official documents on the subject. We have for some time been aware, that in this country at least, true homœopathy no longer existed except in name; but we were not quite prepared for so frank an acknowledgement of the fact as has been made in the documents referred to. Thus we are told in the communication from the committee appointed by the "Homœopathic Physicians' Society of New York," that the proper remedies for cholera are *Cuprum Metallicum* or *Veratrum* in the first stage, and if the patient becomes bad the *Spirits of Camphor* must be resorted to. Yes, the veritable "*Spirits of Camphor*," not the 30th dilution, nor the 61st trituration, but *spirits* of camphor, and that in doses of three drops repeated every few minutes if the symptoms are urgent. The committee making this report is composed of six or eight of the most prominent homœopaths of this city. Their names may be found in the daily *New York Tribune* for the 5th inst. Notwithstanding the boasted certainty and specific nature of homœopathic remedies, there seems still to be some differences of opinion in regard to the true homœopathic remedy for the cholera. Hence, in the *Tribune* for June 8th, we find a communication from Charles J. Hempel, who, though a member of the New York Homœopathic Physicians' Society, yet takes the liberty to differ from the report of the said committee. He regards the cuprum, the veratrum, and the camphor, only as palliatives, while the aconitum napellus furnishes the only true cholera specific. The following are his directions for its use, viz.:

"As soon as the diarrhœa sets in, with or without cramps in the stomach and bowels, with or without vomiting, coldness of the extremities, &c., dissolve 5 drops of the *tincture of Aconite* in 10 table-spoonfuls of clear Croton water, and take two tea-spoonfuls every half hour, until an improvement sets in; then continue every two hours until you feel entirely well. Eat very little, and only light food, gruels, weak tea and toast, &c.

If the diarrhœa should be very bad, attended with or without cramps in the bowels, spasms in the extremities, vomiting, or if the paroxysms should set in immediately with great force, dissolve 10 drops of the tincture of Aconite in ten table-spoonfuls of water, and give the patient 2 tea-spoonfuls every five minutes until the pulse improves, the extremities become warm, and a moisture is perceived on the skin; then continue every 20 minutes until the improvement is strikingly manifest, and finally continue every two hours until the patient is entirely recovered."

There it is, real, genuine, *Crude Tincture of Aconite*, in doses amounting to nearly one drop every five minutes, or ten drops every hour. There is no dilution, no trituration about it; for he tells us that he uses the tincture prepared after Pereira's formula. And in regard to the dose, it should certainly satisfy any allopaths in the country. Pereira himself directs only five drops three times a day.

If we had been desirous of proposing a plan of treatment diametrically opposed to the so called principles of homœopathy in every particular, we could not have accomplished our object better than by adopting the course here recommended by the first homœopaths in this city. Is there the remotest possible similarity between, the symptoms induced by camphor, and those of cholera? Is there even an approximation, between three drop doses of Sp̄ta. Camphor, or one drop doses of Tinct. Aconite, every five minutes, and the smelling, or even taking of a pellet of the 30th dilution of either?—Alas! for the doctrines of attenuation and Similia-Similibus. Well may our friend Kirby, of the American Journal of Homœopathy, exclaim that, "a mongrel in medicine, of all men is the most inconsistent."

Dr. Schmutter.—We have not the pleasure of acquaintance with this gentleman; but we think he is badly used. The *causa teterrima belli* does not appear from the "public summons," but we, nevertheless, clip it from the *Globe* newspaper, with all its faults, *verbatim et literatim*—we will not say *punctualim*,—for we think that our friend, G. B., has helped him in the latter respect:—

PUBLIC SUMMONS.

Three letters to the Medicele Board, April 2th and 6th, and June 28th, I have written, in my doleful situation, for help and assistance. I have said to them, that they have taken up wrong and mean things against me, from Europe, whereby I am not only hindered in my practice and progress, but I am mocked and jeered by every one, in the house and on the street. In this manner, and under such conditions, I am not able to live longer, and I am forced to try it in this public way. For I have not offended any body here, for which I should suffer such torture, in this free country?—

I ask now the Hon. Medicele Board, if they have granted me Licence or not, on the January 3th, 1847, on which day, I have passed the Board, have made my examination and paid them £4 10s 0d. If the medicele Board have not granted me Licence (such as the people say), I have then a right to say, they have stolen the money out of my pocket, and every one what plays against me, is a mean rascal.

I ask now by this the magistrate, the court of justice, and the medicele Board, whether one of the three have anything against me?

If they imagine to have one thing against me, they have to act in an honest way, as it is the custom in this free country, and give to me a trial. Or are my enemies, or adversarys thinking, they have a right to act in such mean mummery way, like mean robber's, to send the letter (whereby I am disgraced by every body, and caused me so many enemies) from Berlin of Prussia, after me? They have no more right to act in this mean way, than they robber's have a right to rob on the street. But they are more worse, by this devilish juggle-play (and I am not able to go them out of the way.) I thing they have no right to act in this manner but madness alone, and falsehood dare assert, that they are thinking to have a right, to do, what other base slavish devilish judgement-seats in Europe have done, so that they work of lies and slavery still stand, here in this free country!!

I wish to live here in peace, in this free country, and to this, me thinks, I have a right, to wish for.

Toronto, July 27th, 1849.

G. H. SCHMUTTER, M. D.

OBITUARY.

On the 19th July, Daniel Arnoldi, Esq., M.D., President of the College of Physicians and Surgeons of Lower Canada; one of the oldest, most honored, and esteemed Physicians of the Province. On 30th July, at Beauharnois, aged 27—Robert Cartier, Esq., M. D., of Cholera; apparently contracted in the discharge of professional duty on cholera patients at Chateaugay.

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR JUNE, 1849.

DATE.	THERMOMETER.				BAROMETER.				WINDS.			WEATHER.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	Noon.	6 P.M.	7 A.M.	3 P.M.	10 P.M.
1,	+56	+66	+55	+61-	29.83	29.78	29.77	29.79	N E	N E	N E	Fair	o'erc'st	Fair
2,	" 60	" 80	" 67	" 70-	29.75	29.61	29.58	29.65	E	S	S	Fair	Fair	Cloudy
3,	" 74	" 76	" 62	" 75-	29.58	29.50	29.47	29.52	S S E	S by E	S by E	Fair	th.&rn.	Fair
4,	" 70	" 79	" 55	" 74.5	29.40	29.25	29.50	29.38	S W	S W	W by S.	Fair	o'erc'st	Fair
5,	" 55	" 67	" 53	" 61-	29.59	29.61	29.66	29.62	N W	N W	N W	Fair	Fair	Fair
6,	" 56	" 69	" 57	" 62.5	29.74	29.70	29.67	29.70	W	W	W	Fair	Fair	Fair
7,	" 60	" 72	" 59	" 66-	29.63	29.48	29.59	29.57	W N W	W N W	N W	Fair	Fair	Fair
8,	" 53	" 68	" 54	" 61.5	29.57	29.55	29.54	29.55	N E	N E	S	Fair	Fair	Fair
9,	" 60	" 81	" 61	" 70.5	29.64	29.59	29.60	29.61	S W	S W	S	Fair	Fair	Fair
10,	" 59	" 72	" 53	" 65.5	29.67	29.75	29.85	29.76	S	S	S S E	Fair	Fair	Fair
11,	" 60	" 75	" 58	" 67.5	29.98	29.99	29.96	29.98	E N E	N E	N E	Fair	Fair	Fair
12,	" 65	" 78	" 52	" 71-	30.02	29.91	29.90	29.94	E N E	E	S S E	Fair	Fair	Fair
13,	" 56	" 78	" 52	" 57-	29.95	29.93	29.94	29.94	S	S	S S E	Rain	Rain	Fair
14,	" 59	" 76	" 65	" 67.5	29.97	29.87	29.73	29.86	S E	S E by S	S E by S	Fair	Fair	Fair
15,	" 70	" 84	" 72	" 77-	29.67	29.55	29.58	29.60	S E	S E	S E	Rain	Fair	th.&n.
16,	" 66	" 70	" 58	" 68-	29.54	29.65	29.78	29.66	S S W	S W	W	Rain	Rain	Fair
17,	" 65	" 85	" 68	" 75-	29.94	29.87	29.87	29.89	N W	W	W	Fair	Fair	Fair
18,	" 68	" 85	" 71	" 76.5	29.94	29.85	29.78	29.86	S W	W	W	Fair	Fair	Fair
19,	" 69	" 82	" 76	" 75.5	29.85	29.75	29.73	29.78	S W	S S W	S S W	Fair	o'erc'st	Fair
20,	" 74	" 90	" 78	" 82-	29.74	29.67	29.66	29.69	S S W	S S W	S S W	Rain	Fair	Fair
21,	" 76	" 93	" 80	" 84.5	29.73	29.68	29.70	29.70	S S W	S S W	S W	Fair	Fair	Fair
22,	" 76	" 92	" 80	" 84-	29.74	29.61	29.59	29.65	S W	S W	S W	Fair	Fair	Fair
23,	" 75	" 85	" 74	" 80-	29.58	29.54	29.58	29.57	W	W	W	Fair	Fair	Fair
24,	" 70	" 86	" 65	" 78-	29.60	29.45	29.42	29.49	W	W	W	o'erc'st	Cloudy	Rain
25,	" 65	" 78	" 67	" 71.5	29.46	29.39	29.42	29.42	W	W	W	Cloudy	Fair	Fair
26,	" 62	" 71	" 66	" 66.5	29.50	29.57	29.50	29.56	N W	W	N W	Fair	Fair	Fair
27,	" 66	" 80	" 63	" 73-	29.66	29.61	29.64	29.64	N	N N E	N N E	Fair	Fair	Fair
28,	" 56	" 87	" 62	" 71.5	29.67	29.62	29.57	29.62	N N E	N N E	N N E	Fair	o'erc'st	Rain
29,	" 57	" 72	" 65	" 64.5	29.58	29.59	29.66	29.61	E	E	N N E	Rain	Cloudy	Fair
30,	" 66	" 78	" 64	" 72-	29.56	29.40	29.46	29.47	N W by N	N N W	N N W	Fair	Rain	Cloudy

THERM. } Max. Temp., +93° on the 21st  
 } Min. " +53° " 5th  
 Mean of the Month, +71.5

BAROMETER, } Maximum, 30.02 In. on the 12th  
 } Minimum, 29.25 " 4th  
 Mean of Month, 29.669 Inches.

MONTHLY METEOROLOGICAL RECORD FOR THE YEAR 1886. OBSERVED AT ONTARIO, 108 FEET.—(For the Brit. Amer. Jour. of Med. and Phys. Science.)

Latitude 43° 39' 4" N. Longitude 79° 21' 5" W. Elevation above Lake Ontario, 108 Feet.

DAY.	Barometer at Temp. of 32°.			Temperature of the Air.			Tension of Vapour.			Humidity of the Air.			Wind.			Inches of Rain.	WEATHER.		
	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.				
1.	29.740	29.680	29.641	29.682	54.0°	58.7°	53.0°	54.1	397	435	357	380	97	90	90	.92	Calm.	E. by S.	E. N. E.
2.	29.544	29.446	29.414	29.469	54.2	64.2	56.8	57.8	367	501	408	421	89	86	91	.89	Calm.	E. S. E.	E. by S.
3.	29.447	29.381	—	—	65.0	72.4	—	—	611	607	—	—	89	78	—	—	S. by W.	S. by W.	S. by W.
4.	29.380	29.462	—	—	65.0	65.6	50.0	59.0	523	324	200	343	87	53	56	.67	Calm.	N. W. by W.	N. W. by W.
5.	29.736	29.738	—	—	48.3	59.2	52.6	52.8	337	332	211	266	71	67	61	.67	N. W.	N. W. by W.	N. W. by W.
6.	29.587	29.667	29.666	29.596	51.2	64.8	51.8	55.3	256	366	298	302	69	61	78	.70	Calm.	S. by W.	S. by W.
7.	29.671	29.618	—	—	56.2	62.1	62.1	55.2	314	239	288	303	71	53	67	.65	Calm.	E.	E.
8.	29.470	29.527	—	—	52.2	57.1	53.4	54.4	317	323	343	325	82	72	86	.78	Calm.	N.	N.
9.	29.531	29.520	—	—	55.0	61.0	53.0	56.0	300	314	272	300	70	68	68	.68	N. E. by N.	S. E.	S. E.
10.	29.699	29.733	—	—	60.0	63.6	60.0	63.6	382	374	—	—	55	63	63	.63	Calm.	S. S. W.	S. S. W.
11.	29.877	29.806	—	—	57.1	62.1	62.1	57.0	315	322	319	322	69	59	80	.71	Calm.	E. by N.	E. by N.
12.	29.763	29.739	—	—	55.4	64.0	54.0	54.6	328	396	349	354	74	92	85	.85	E. by N.	E. S. E.	E. S. E.
13.	29.785	29.782	—	—	55.1	68.8	59.2	60.6	374	496	395	415	88	72	81	.81	Calm.	E. S. E.	E. S. E.
14.	29.777	29.644	—	—	56.4	66.7	59.6	60.5	403	516	462	454	91	81	.92	.88	E. by N.	E. by N.	E. by N.
15.	29.536	29.486	—	—	62.5	69.0	63.0	64.7	510	634	497	539	93	88	.90	.88	Calm.	S. W.	S. W.
16.	29.630	29.704	—	—	60.4	71.8	60.6	63.8	452	432	376	419	57	57	.72	.73	N. W. by N.	N. W.	N. W.
17.	29.926	29.872	—	—	68.5	72.4	—	—	496	537	—	—	73	70	—	—	Calm.	S. E.	S. E.
18.	29.914	29.852	—	—	64.0	74.4	62.4	65.5	503	583	483	508	87	70	.87	.83	Calm.	E. S. E.	E. S. E.
19.	29.847	29.782	—	—	65.2	78.0	70.2	70.4	547	701	616	622	91	75	.87	.86	Calm.	S. W. by S.	S. W. by S.
20.	29.805	29.713	—	—	74.0	81.0	72.2	74.4	678	709	618	650	84	69	.79	.79	Calm.	S. W. by S.	S. W. by S.
21.	29.766	29.719	—	—	71.9	84.4	70.0	74.6	620	741	697	663	82	65	.88	.80	Calm.	S.	S.
22.	29.707	29.655	—	—	72.8	75.8	64.2	70.5	672	695	569	634	86	80	.98	.80	Calm.	S. W. by W.	S. W. by W.
23.	29.703	29.638	—	—	74.9	74.9	62.0	67.2	669	579	479	501	73	68	.88	.77	N. W. by N.	S. by W.	S. by W.
24.	29.516	29.394	—	—	69.2	75.1	—	—	569	670	—	—	82	79	—	—	Calm.	S.	S.
25.	29.535	29.487	—	—	63.9	73.4	59.8	65.0	418	548	400	452	66	68	.80	.75	N. N. W.	S. S. W.	S. S. W.
26.	29.562	29.584	—	—	67.4	77.2	63.4	68.6	490	594	465	489	72	65	.81	.71	N. W. by N.	Calm.	Calm.
27.	29.602	29.524	—	—	69.4	76.0	68.2	70.5	599	585	528	569	86	67	.79	.80	Calm.	E. S. E.	E. S. E.
28.	29.493	29.452	—	—	68.0	71.6	64.3	67.9	587	609	547	582	89	81	.93	.88	Calm.	E. by E.	E. by E.
29.	29.505	29.549	—	—	66.3	72.6	64.0	67.3	582	624	520	568	91	80	.89	.87	N. W. by W.	S. E. by E.	S. E. by E.
30.	29.573	29.455	—	—	65.0	76.4	64.2	67.9	481	652	508	538	79	74	.87	.80	N. W. by N.	S. by W.	S. by W.
Mean	29.656	29.615	29.606	29.626	61.5	69.3	60.0	63.0	449	512	429	459	82	71	.82	.79	2.08 miles.	6.07 miles.	2.30 miles.

Highest Barometer, 29.939 on 13th, at 9 a.m. } Monthly Range 0.609  
 Lowest do. 29.380 on 4th, at 7 a.m. } Monthly Range 0.609  
 Highest Temperature, 85° 4 on 21st, at 3 p.m. } Monthly Range 49.2  
 Lowest do. 33° 52 on 5th, at a.m. } Monthly Range 49.2  
 Mean Max. Therm., 73° 23 } Mean Daily Range, 16° 59  
 Mean Min. do. 58° 23 }  
 Extreme Daily Range, 4th, 3 p.m., 89° 32 from pm of 4th to am of 5th  
 Mean Temperature, at 3 p.m., 69° 32 } Differ., 10.68  
 do at 6 am, 65° 16 }

Sum of the Atmospheric Currents resolved into the four Cardinal directions, in miles.  
 North 578.2  
 East 783.3  
 South 909.6  
 West 909.6  
 Mean Velocity of the Wind, 3.32 miles per hour.  
 Maximum Velocity, 17.6 miles from 11 am to noon on 4th  
 Most Windy Day, 4th.—Mean Veloc per hour 7.63 miles  
 Least do. 26th.  
 Diurnal Variation.  
 Mean velocity at 4 p.m., 6.07 }  
 do at 6 a.m., 1.69 }  
 Diurnal Variation.  
 at 4 a.m., 6.07 }  
 at 6 a.m., 1.69 }

Temperatures.  
 Mean, 60.30° }  
 Max., 79.92° }  
 Min., 36.7° }  
 Range, No. Days, 43.2° }  
 9 }  
 11 }  
 15 }  
 16 }  
 12 }  
 9 }  
 11 }  
 10 }  
 14 }  
 8 }  
 7 }

Rain.  
 Inches, 4.869 }  
 Days, 11 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }

Winds.  
 Calms, 118 }  
 Mean, 196 }  
 Days, 118 }  
 Days, 196 }  
 Days, 324 }  
 Days, 300 }  
 Days, 303 }  
 Days, 272 }  
 Days, 328 }  
 Days, 245 }  
 Days, 342 }  
 Days, 339 }  
 Days, 332 }  
 Days, 187 }

Winds.  
 Calms, 118 }  
 Mean, 196 }  
 Days, 118 }  
 Days, 196 }  
 Days, 324 }  
 Days, 300 }  
 Days, 303 }  
 Days, 272 }  
 Days, 328 }  
 Days, 245 }  
 Days, 342 }  
 Days, 339 }  
 Days, 332 }  
 Days, 187 }

Mean, 2.020 }  
 Days, 2 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }  
 Days, 0 }

Heart Frost on the morning of the 5th  
 Yellow matter fell in rain on 22d & 23rd

Further explanatory notes will be found at the foot of all the Registers for 1846 and 1846.  
 No Magnetic Disturbances observed during the month of June.

TO MEDICAL STUDENTS.

CLINICAL LECTURES ON DISEASES  
OF THE EYE AND EAR.

BY DR. HOWARD,

Oculist and Aurist, Surgeon to the Montreal Eye and  
Ear Institution.

DR. HOWARD will deliver Clinical Lectures on  
Diseases of the Eye and Ear, three days in each  
week, during the months of MAY, JUNE, JULY and  
AUGUST, 1849.

The Lectures will be illustrated by numerous cases  
under the daily observation of the Students, and every  
opportunity will be taken to make them practically  
familiar with the operations peculiar to this department  
of Surgery.

For particulars, apply to Dr. HOWARD, 142,  
Craig Street.

Montreal, April 2, 1849.

COLLEGE OF PHYSICIANS AND SURGEONS  
OF LOWER CANADA.

THE BY-LAWS of the COLLEGE having received  
the sanction of the Executive, its BOOKS are  
NOW OPEN for the REGISTRATION of MEM-  
BERS.

It is required of such as desire to register, that they  
forward to the undersigned (post-paid) their name,  
legibly written in full, their age, birthplace, date of  
Provincial License, and the College Fee, viz., Ten  
Dollars in current money of this city.

All such as signed the Petition to the Legislature for  
the Act of Incorporation, are entitled to Register forth-  
with, provided that at the time of their signing they  
were in possession of a Provincial License to practice  
Medicine, &c., &c.; and in virtue of the By-Law which  
refers to Membership, the Books of the College shall  
be kept open during a period of Six Months from the  
time of the passing of the said By-Laws, viz., the  
Tenth day of October, 1848, for the Registration of  
every Member of the Profession who desires so to do,  
provided such Member has been in possession of a  
Provincial License to practice Medicine, &c., &c.,  
Four Years at the time of the passing of the Act of  
Incorporation, viz., 27th July, 1847.

FRANCIS C. T. ARNOLDI, M. D.

Registrar & Treasurer,  
Coll. Ph. & Surg., L. C.

58, CRAIG STREET,  
Montreal, 1st Dec., 1848.

MEDICO-CHIRURGICAL SOCIETY.

THE next Monthly Meeting of this Society will be  
held at the Rooms of the Mechanics' Institute,  
on Saturday Evening, July 7, at 8 o'clock P.M.

HECTOR PELTIER, M.D.,

Montreal, July 2, 1849.

Secretary

THE Subscribers have their usual assortment of gen-  
uine Drugs and Chemicals, which they offer low for  
cash, or approved credit.

WM. LYMAN & CO.,

194 & 196, St. Paul Street, Montreal.



URQUHART'S

FLUID EXTRACT OF JAMAICA SARSAPARILLA

THE Subscriber begs leave to submit to the Medical  
Profession and to the public, his preparation of  
Sarsaparilla which has been extensively used in their  
practice, by many of the most eminent Medical Gen-  
tlemen in the City, and with the most beneficial results,  
as the following testimonials, with which he has been  
very politely favored, will satisfactorily show.

For sale only at the Medical Hall, Great St. James-  
Street.

ALEX. URQUHART.

August 2.

ALEXANDER URQUHART, ESQ.—DEAR SIR,—I have  
much pleasure in bearing testimony to the faithful man-  
ner in which you prepare your Fluid Extract of the  
Compound decoction of Sarsaparilla. This I am en-  
abled to do on account of several of my patients having  
derived the greatest benefit from its use.

For Constitutional Syphilis and Chronic Rheumatism,  
I have prescribed it with the most marked effects; I can  
therefore, without the least hesitation, recommend your  
preparation as one possessing all the Medicinal quali-  
ties of the Compound Decoction of Sarsaparilla, while  
it is, at the same time, more palatable, and less apt to  
derange the stomach.

I remain, Dear Sir,

Your most obed't serv't,

W. FRASER, M. D.

Lecturer on Medical Jurisprudence,  
M'Gill College.

Montreal, 9th February, 1847.

Montreal, February 10th, 1847.

I beg to certify, that I have employed very exten-  
sively, the "Fluid Extract of Sarsaparilla," made by  
Mr. Urquhart, in all those diseases in which that Medi-  
cine is usually prescribed, and that I have found it a  
most valuable preparation. I can, moreover, state from  
personal investigation, that the proprietor employs none  
but the purest ingredients, and bestows the greatest  
care and attention upon the mode of preparing the re-  
medy.

ROBERT L. MACDONELL, M. D.,

Lecturer Institutes of Medicine  
M'Gill College,

Physician to the Montreal General Hospital.



Mr. Urquhart's Sarsaparilla is the only preparation of this valuable Medicine that I can, with entire confidence, recommend to my patients.

M. M'CULLOCH, M. D.

Montreal, 10th February, 1847.

DEAR SIR,—I have frequently prescribed your Fluid Extract of Sarsaparilla, and I have no hesitation in recommending it as a very elegant and convenient form for administering that Medicine.

Yours very truly,

GEO. W. CAMPBELL.

To Alex. Urquhart, Esq.

Montreal, 10th February, 1847.

## CHLOROFORM.

THE SUBSCRIBERS have prepared, for Sale, Chloroform, or Trichloride of Formyle, the new Anæsthetic Agent, as a substitute for Ether, recently proposed by Dr. Simpson, of Edinburgh. This Agent has received the recommendation of the highest Medical Authorities in Great Britain, and has been used with increased success in this vicinity.

S. J. LYMAN & Co.,

Chemists, Place D'Armes, Montreal.

Jan. 31, 1848.

## MASSACHUSETTS MEDICAL COLLEGE.

THE MEDICAL LECTURES of HARVARD UNIVERSITY will commence at the MASSACHUSETTS MEDICAL COLLEGE in BOSTON, on the first WEDNESDAY in NOVEMBER.

Obstetrics and Medical Jurisprudence by  
Materia Medica and Clinical Medicine by  
Theory and Practice of Medicine by  
Chemistry by  
Pathological Anatomy by  
Anatomy and Physiology by  
Principles and Operations of Surgery by

WALTER CHANNING, M.D.  
JACOB BIGELOW, M.D.  
JOHN WARE, M.D.  
JOHN W. WEBSTER, M.D.  
JOHN B. S. JACKSON, M.D.  
OLIVER W. HOLMES, M.D.  
HENRY J. BIGELOW, M.D.

Clinical lectures at the Hospital three times a week by the professors of Clinical Medicine and of Surgery. Surgical operations are very numerous. The safe and effectual practice of etherization is taught in this School. Practical Anatomy is amply provided for by new and liberal arrangements.

Fees for the whole Course, \$80. Matriculation, \$3. Dissecting Ticket, \$5. Graduation, \$20. Hospital and Library gratuitous.

A descriptive pamphlet may be had by application, post paid, to David Clapp, Printer, corner of Washington and Franklin streets, Boston.

July 4, 1849,

## TORONTO SCHOOL OF MEDICINE.

THE next session will commence on the LAST MONDAY in OCTOBER, and terminate on the LAST MONDAY in APRIL; under the following Lectures:

On Anatomy and Physiology  
Midwifery and Diseases of Women and Children  
Principles and Practice of Surgery  
Theory and Practice of Medicine  
Practical Anatomy  
Materia Medica and Therapeutics  
Chemistry

Dr. ROLPH.  
Dr. WORKMAN.  
Dr. PARK.  
Dr. MORRISON.  
Dr. AIKEN.  
Dr. LANGSTAFF.  
Mr. HURLBURT, A.M.

This school is recognised by the Faculty of Medicine of the University of McGill College, Montreal, and qualified for graduation, in accordance with its rules.

Toronto, July 16, 1849.