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.

- ☐ 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.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE

BRITISH AMERICAN JOURNAL

OF

MEDICAL AND PHYSICAL SCIENCE.

VOL. II.] MONTREAL, SEPTEMBER, 1846. [No. 5.

SPINAL MYELITIS DEPENDANT ON AN UTERINE AFFECTION.

By A. HALL, M. D.

Mrs. — — D., a lady, aged 26, was married in May, 1844, and came with her husband to reside in this city in the month of July following. Her temperament was phlegmatic, and her habit of body decidedly strumous. This was most marked in some of the principal joints, the ligaments of which appeared so destitute of the ordinary tone which characterizes them, that a partial displacement of some of them occasionally occurred when the limbs were made to assume certain positions. This was especially the case with the knee and shoulder joints. To remedy the inconvenience resulting from this affection of the former joint, she wore, constantly, a laced knee cap. Before marriage her catamenial periods recurred, with constancy, every third week. The flow was usually profuse, attended with considerable pain and a good deal of constitutional disturbance. She stated that she had been more than once under medical care for "flying" pains through her chest, which were felt most acutely, and seemed chiefly seated below her right breast. These had been always relieved by blistering, &c. &c. It was impossible to decide, whether these depended on, or were connected with, spinal irritation, but it did not appear that any attention had been drawn to that part from the mode in which she had been treated.

On the 16th July, I was summoned hastily to visit her. She was flooding profusely and had every symptom of a threatening miscarriage, an event which occurred on the 22d, although every means were adopted to avert it. Feeling herself comparatively well on the day following, she very imprudently rose from bed, dressed herself, and when visited, was found reclining upon a sofa. Although warned of the probable consequences, feeling uneasy towards the evening, and under the idea that exercise might benefit her, she walked several times up and down the room, the result of which was, as may be anticipated, a prolapsus uteri. By a rigid maintenance of the recumbent posture, the use of sponge pessaries, aided by astringent injections, cold bathing, strict attention to the state of her bowels and the steady use of tonics, in the course of about six weeks she was enabled to move about without much inconvenience; and about the middle of October she removed to her own house, and was fully capable of superintending her own establishment. During this time, however, the catamenia recurred, as usual, every three weeks; the flow persisted profusely for about a week, so that from the end of one period to the commencement of the following, there was scarcely the intermission of a fortnight. The pain which she now suffered, at these times, was always attended with a sensation of "*bearing down*," and a "dragging feeling" extending from the umbilicus, which were evidently referrible to a greater prolapse of the uterus at such periods than at others. In the intervals, she was, generally speaking, free from pain, and felt so much improved as to be able to dispense with the pessaries altogether.

On the 31st December she walked to town for the purpose of shopping, and having effected her object, she returned home in a cab-sleigh, in which she was most severely jolted. The consequence of this was the re-appearance of every symptom of the prolapse to an aggravated degree. Rest, in the recumbent posture, relieved her to a certain extent. The catamenia returned during the night; and being anxious to receive visitors on New Year's day, she got up for the purpose. I found her that day with a flushed face, a quick pulse and considerable febrile excitement, but no other pains than those I have described. In accordance with my advice, she retired to bed. The catamenia was this time more profuse than ordinary, and assumed a menorrhagic character, lasting a few days longer than usual. Such is a general outline of the previous history of the case, and appears to me to be interesting when connected with subsequent events.

For greater convenience, her bedroom had been changed from an upper to a lower storey of the house in which she resided; but the head of her bed was unfortunately placed in the vicinity of a window, every crevice of which had been carefully stopped to exclude draughts of cold air, except by an oversight in one direction, immediately opposite which her head laid at the distance of about eighteen inches. On the 12th of January, symptoms of bronchitis shewed themselves,

which were encountered by the ordinary treatment. In the course of a few days she was attacked by flying pains across the upper part of the thorax. They varied considerably in their direction. Sometimes they would shoot down the arms; at other times across the neck; at other times the whole scalp became involved, from the occiput to the frontal region. Increasing in intensity, the slightest alteration in the position of the head, was sure to exacerbate them if present, or to induce them if absent. There was scarcely any febrile excitement, her pulse regular, and no headache, except the pain described, which was frequently agonizing. There was, however, nausea and costiveness. There was but little tenderness on pressure in any of the parts in which she suffered these pains. Suspecting spinal irritation, the spine was carefully examined, *but no local evidence of such an affection was discoverable.* Her chest was examined by the stethoscope, but no abnormal sound, except a mucous râle at the upper part of the left lung, was observed. The case was viewed as one of neuralgic rheumatism, and treated accordingly. In the course of a fortnight she was sufficiently recovered to bear removal to her mother's house, and her strength became there, in a few days more, so far restored as to enable her to walk about, and even to join the family circle. She, however, again laboured under the prolapsus, and was again compelled to adopt the employment of the sponge pessaries, and the astringent injections.

From this time her convalescence had every appearance of being progressive, when about the beginning of March a new train of symptoms began to develope themselves. Nausea and vomiting, especially after ingesta—obstinate costiveness—shooting pains across the lower part of the thorax, and apparently along the attachment of the diaphragm—anxious and hurried breathing, with frequent sighing. Her spine was again examined, and *a marked tenderness on pressure was now for the first time observed over the seats of the ninth and tenth dorsal vertebræ,* pressure here exciting the thoracic inquietude. Remedial measures were immediately directed to this part. This treatment consisted in the employment of repeated blisters, and counter-irritant ointments of tartar emetic and croton oil. The internal exhibition of occasional brisk purgatives, in which the croton oil was the chief ingredient, and a mild mercurial salivation. Bleeding was not deemed expedient, in consequence of her habit of body, and her general debility. There was yet but little acceleration of the pulse, and but a very trifling febrile reaction. The pains and uneasiness, despite of this treatment, which was strictly carried out, augmented, and became most acute, as well as much aggravated by the slightest pressure. On the 14th March, her pulse had increased to 100, with considerable fever and thirst. The dyspnœa increased, especially towards evening and during the night, but remitted towards morning and during the day. She complained of a sensation, as if "*her chest was bound by a hoop,*" which now became a new symptom, superadded to those detailed. On the 21st, a remission in the severity of all the symptoms took place, and she both looked and expressed herself as being better. This apparent state of amelioration continued for a few days. Early on the morning of the 24th, I was hastily called up to see her, the message left being to the effect that she was dying. Desirous of availing myself of Dr. Holmes' experience, we from this time attended the case together. We found her recovering from a state of apparently hysterical delirium, in which she had been during the latter part of the night. There was no fever, thirst great, tongue much loaded with a thick white fur, pulse about 96, small, and rather sharp, retention of urine, no alvine evacuation since the preceding morning, constriction across the chest, with darting pains through it as before, sensation of numbness in lower extremities, with great pain on moving or flexing them. On examining the spine, *no tenderness was experienced on pressing over the originally tender spots, but there was considerable tenderness now over the seats of the fourth and fifth cervical vertebræ.* The catheter was used, and a turpentine enema administered, which speedily brought away a large quantity of very offensively smelling fæculent matter. The urine possessed an exceedingly fœtid and highly ammoniacal odour. Her feet were immersed in a hot mustard bath, and the revulsive treatment to the nuchæ was again adopted, the blisters being afterwards dressed by extract of belladonna. A blister was re-applied to the dorsal vertebræ, over the seat of an old one, which was yet uncicatrized. Although she had been previously slightly mercurialized, it was deemed advisable to put her again under the influence of mercury, and three grains of calomel, with three grains of camphor, were accordingly prescribed to be taken every three hours. An anodyne draught of tincture of opium, with succinated spirit of ammonia, was instantly administered. In the evening of the same day there was but little amelioration. She had a tranquil sleep, however, under the influence of the narcotic, which required repetition before that effect took place. It was again necessary to use the catheter, and administer an enema. The withdrawal of the catheter was always attended with great pain.

On the 25th, all the symptoms were worse. On the 27th, leeches were applied to the nuchæ without benefit. Pulse 120, smaller, becoming irregular, yet still retaining its sharpness. Tongue dry, and becoming brown.

Her intelligence seemed perfect when she was sharply addressed, and her attention engaged on the speaker, but she quickly relapsed into a kind of muttering delirium, to which eventually was superadded subsultus tendinum. She calmly expired on the morning of the 28th.

A known objection on the part of her relatives to post mortem examinations, precluded an examination of any other part than the spine. Forty-eight hours after death, the vertebral canal was opened, and the spinal column exposed. The theca was found throughout its whole length much *congested*, but without any evidences of *inflammation*. On running the finger along the cord, at the tenth vertebral space it suddenly sank into its substance. The theca was slit up, and here, and here only, was any disorganization of the cord perceptible; for the space of about an inch it had undergone a complete ramollissement. The softened tissue was *white*, (not brown or lees colour, as usually seen), and the disorganization appeared to have extended through the cord, involving the grey as well as the medullary portion. The cervical portion of the cord was firm, and of the usual consistency.

The close attention which has been bestowed upon pathology, has of late years elicited much useful information relative to the influence which appears to be exerted upon the brain and spinal column by deviations from a healthy state in the various viscera of the body. The sympathetic phenomena which thus develope themselves, have been chiefly studied with reference to gastritis and inflammatory affections generally of the mucous and serous coats of the intestinal canal, and more lately still of the kidneys and urinary apparatus. The principal laid down by Dr. Stokes, "that in all diseases, as a general rule, there is an affection of the nervous system, either local or general, or, in other words, that there is no disease which we could name, which does not present signs of an affection of the nervous system, either *quoad* the suffering organ itself, or of an affection more general and diffuse," is a perfectly just one, consonant with the experience of all who watch narrowly the progress of diseases, and is a necessary consequence of that very intimate nervous communication which is found to exist, either directly or indirectly, between all parts of the animal organization. Most usually, the reflex phenomena which are thus induced, are the consequences of simple irritation of the nervous centres, not the slightest abnormal appearances having been discerned in the brain or spinal cord after death in cases in which such phenomena were even markedly developed. Instances of this nature might be multiplied, but they are unnecessary, as brevity is my object; but while thus in the generality of cases, irritation at the peripheral extremities of the nerves, may excite no appreciable morbid alteration in the organization of the brain or cord, there yet can be no doubt, that when long continued and of an exalted character, it may be productive of such effects. The following case, quoted in Stokes's Lectures on the Theory and Practice of Physic, will illustrate this point:—"A soldier was wounded in the right shoulder with a lance, in consequence of which he got an aneurism of the axillary artery, for which an operation was performed. At the moment the ligature was tightened, he experienced exquisite pain in the situation of the ligature, which extended to the brachial plexus; this continued to the next day, and then ceased. On the fourth and fifth days the pain returned with increased violence, and continued until the seventh day, when it became intolerable. He was blooded, but without any good effect. He then became comatose. His head was drawn backwards; he had alternations of stupor and excitement, and soon after expired. On dissection, the ligature was found to embrace some of the principal branches of the brachial plexus, and there was an abscess of the posterior lobe of the brain, extending to the optic thalamus."

In the Transactions of the Medico-Chirurgical Society of London for 1841, there will be found an interesting and highly important paper by Mr. Stanley, demonstrating unequivocally that paraplegia may be induced by severe spinal disease, as a secondary affection, without any necessary alteration of structure in the cord or its membranes; affording this valuable practical result, that paraplegia is not always necessarily dependent upon specific disease of the cord, and disclosing a means of resort to a more rational line of treatment in some of such cases. In two only out of the seven cases narrated by Mr. Stanley, were any morbid changes in the cord perceived, and these changes consisted chiefly in vascular turgescence and slight effusion; but these are sufficient to demonstrate the effect on the cord of a persistent irritation at the peripheral extremities of the nerves which supply the kidneys.

To these cases illustrative of the principle laid down, might be cited others, in which post mortem examinations have revealed the existence of inflammation of the meninges of the brain, as a result of inflammatory affections of the intestinal tube. That uterine affections are equally competent to induce similar consequences, cannot be doubted. We recognize such effects in the mania, delirium, occasionally convulsions, and other symptoms, dependent on the irritation, to say the least, of the great nervous centres, propagated from the suffering organ. The case which I have given affords another proof of the effect of such long continued irrita-

tion, the induction of inflammation and its consequences in that part of the cord more immediately under sympathetic connexion with it. We have to remember the anatomical relations of the uterus with reference to the nerves which supply it, and maintain its relations with other parts of the system. The uterus and its ovaries are mainly supplied by the spermatic plexus descending from the renal in which the lesser splancnic terminates. This nerve arises from the tenth and eleventh thoracic ganglia of the great sympathetic, which communicate directly with the anterior branches of the tenth and eleventh spinal nerves. It was opposite the tenth dorsal vertebra that the ramollissement of the cord had taken place. The circumstances of the case are of too striking a feature to permit us to consider this as a mere coincidence. The uterine irritation, dependant on the prolapsus can be viewed in no other light than a cause, and the myelitis as its effect; the irritation at the peripheral extremities of the uterine nerves, inducing, in the first instance, by reflex action, symptoms of spinal irritation alone, which, from continued application of the exciting cause, degenerated into inflammation with its consequences.

CONTRIBUTIONS TO CLINICAL MEDICINE.

By James Crawford, M. D.,
Lecturer on Clinical Medicine and Surgery, McGill College.

CASE OF RHEUMATIC ARACHNITIS.

Catherine Benson, ætat. 24, the wife of a soldier, of highly respectable character and appearance, delicate looking, slender figure, but previously enjoying good health, was admitted into the Montreal General Hospital, under my care, on the 15th September, 1845, having been complaining for about a fortnight of severe rheumatic pains in her shoulders, neck, and back of her head, and scalp, which she attributed to cold, having carelessly exposed herself to cold, while overheated with washing, being at the time very insufficiently clothed. She had not much done for her, except such homely remedies as she thought of herself, for several days, till the head became affected, when it was shaved, and cloths wet in cold water and vinegar were applied, which aggravated her complaint to such a degree, that she applied for admission into hospital. At the time of admission, the pains of her head and back of her neck, were excruciating, and darting like *tic doloreux*, or tooth-ache; and during the paroxysm were so severe, as quite to overpower her. The pupils were generally slightly dilated; her respiration hurried and noisy; tongue, for the most part, dry and reddish, being partially covered by a white fur, in patches. The epigastrium, slightly tender on pressure: there was some perspiration about the forehead; no indications of cardiac disease were discovered; pulse 120, compressible, and of natural volume.

The case was now viewed as a rheumatic affection of the meninges. She was ordered calomel gr. ij., and opium gr. ¼, every third hour, and a blister to the back of her neck, and stimulating liniments to her neck and shoulders. For several days her complaint appeared stationary; although its intermittent character gave her intervals of ease and comparative quiet, still the pains of her shoulders and neck became more prominent, as the more excruciating neuralgic pains of her head moderated, being masked (as it were) by their severity, during their persistence.

On the 19th it is reported, that her pupils were more dilated, and apparently insensible to the light; the alæ nasi slightly dilated at each inspiration, and although she was quite sensible, and expressed her intelligence by a nod, or other motion of the head, she appeared unable to speak. Her pulse 96, soft, and of a natural volume. Apprehending that the opium might have some deleterious influence, it was discontinued, the calomel ordered alone, as formerly: sinapisms were applied to the legs, and mercurial ointment, ʒiij. ordered to be rubbed into the axilla and groins. Next day, the report states, that she derived much benefit from the treatment, could now speak a few words very connectedly and sensibly, but complained that her memory was very deficient, and that she could not find words to express herself. The pupils were more natural; her headache easier; the pains of her shoulders as before.

The following day she was still better; she spoke with more freedom and ease, her memory still, however, very deficient, of which she complained; her mouth, becoming tender, she was ordered to discontinue the mercury, to take hydriodate of potass, gr. iij., three times a day, and to have some chicken broth.

From this period, she appeared to go on pretty well; her complaints assuming a periodic character, an exacerbation taking place each alternate day, the intermediate one being one of ease: she was ordered, in addition, to take vini colchici, ℥ss. and tinct opii., gtt xx ter. die.

October 1st.—The report states, that she goes on improving; her complaints observing the periodic character; the exacerbations commencing towards evening, and generally continuing about 24 hours, during which time she could speak but little, or move her head, from the severity of the pain: during the period of ease, she could speak freely, and appeared to enjoy herself much; there was no febrile excitement, and the affection was quite of a neuralgic character.

Ordered di-sulphate of quinine gr. ss. ter. die. and two blisters to her temples.

On the 7th she is stated to have passed the intervening period much as formerly: she now complained of soreness of the epigastrium, and acidity of the stomach. She was ordered carbonate of magnesia, 3i. and a draught of acetate of morphia gr. ss. ter. die., on her neuralgic days.

11th.—With the exception of some nausea and vomiting of bilious matter, there was no particular change in the case since last report. Her tongue has assumed the patchy condition; her bowels are free, and her stomach has been relieved by an emetic; pulse 86; continues her magnesia and morphia.

Had a severe attack of pain on the 12th; her countenance indicated great suffering; the eyebrows were contracted, and the pupils dilated; pain shooting like a toothache; pulse 120, small and weak. She was now ordered nitrate of potass 3 vij. in barley water lb. ij., this to be taken during the day; to have ung. hydrarg. 3i. rubbed into the axilla daily.

After this period, she had four days of comparative ease, when the pain returned severely, her stomach became irritable, and she threw up acid fluid. She remarked, that the vomiting was contemporaneous with the headache, and, she always said, was caused by it. Her mouth was affected by the mercury, which she was ordered to discontinue, and to take sulphate of magnesia (2 drachms), largely diluted during the day; opium in grain doses, four times a day, was now tried; and after some days, Graves' Mixture, containing tinct. opii. ½ ounce, and antim. tartar. gr. iv., and misturæ camphoræ 8 ounces, half an ounce to be taken every second hour, to endeavour to obtain sleep, of which she had been deprived for several nights, but without any effect. Blisters were then applied to the temples, and acetate of morphia sprinkled over the abraded surface, with only temporary relief.

These remedies, together with colchicum, were repeated, without any permanent advantage, and she had lost her flesh and strength, from her long suffering and abstinence. She was ordered quininæ di-sulph gr. ss. ter. die.

Again she had a period of ease for several days, slept well, and made no complaints, but of debility; she fancied she would now get over her suffering: she did not, however, regain strength, but appeared gradually, although very imperceptibly, to waste away; her perspirations becoming more profuse, and her appetite quite failing; pulse becoming rapid (132) small and unequal. For several days she continued in this debilitated state, although free from pain, and died on the 18th November, two months from her admission.

The post mortem inspection exhibited the body very much emaciated. When the calvarium was removed, the vessels of the dura mater appeared very turgid with blood; the substance of the brain firm and very vascular; upwards of four ounces of serum were contained in the ventricles, and burst out when the brain was slightly raised up. The dura mater, at the base of the skull, was of a rose color, but no effused lymph was perceived at any part.

The hydrocephalic appearances which the autopsy revealed, may give rise to a question,—Would not a more rigid antiphlogistic plan of treatment have been proper, and, perhaps, have averted the fatal issue? I would reply, that the difficulties which the obscurity of the case imposed, are sufficient reasons for not resorting to blood-letting—a measure which does not, by any means, meet the general approbation or concurrence of the profession, even when the indications are more palpable than they were on the present occasion.

Many modern physicians are averse to blood-letting in rheumatism, and there are also many who even attribute evil consequences to its use, supposing that it favors the metastasis, or translation of the disease from external to the internal and vital organs; and my talented friend, Professor Todd, thinks that affections of the brain in cases of rheumatism, only occur on those occasions where blood-letting has been previously employed. The present occasion, however, does not support this opinion, as there had not been any used; on the other hand, we have also high authority for the free use of the lancet, in all cases of inflammatory rheumatism; disregarding the views of a specific nature of the disease, and the opinion of the unsuitableness of this remedy in such cases.

It does not appear to me, that the increased fullness of the cerebral vessels, or rosy tint of the dura mater, and collection of serum in the ventricles, requires an inflammatory cause for its explanation; the minor grade of irritation, (if they can be separated) being probably sufficient.

In a case related by Dr. McLeod, in his work on rheumatism, where the meninges became involved, the patient was only able to reply by monosyllables, although apparently quite intelligent; there was strabismus, and some convulsive motions of the muscles of the face. The autopsy showed an injected condition of the arachnoid, and fluid at the ventricles, slight adhesions of the convolutions, the corpus striatum appearing as if covered with cream.

It has been remarked by Dr. Budd, that those cases which terminated fatally, with symptoms of arachnitis, the appearances after death were by no means decisive. In no case on record, (he says), were there either false

membranes or purulent effusion: in some there was a turgid state of the vessels, or an opaline serum beneath the arachnoid, while in others there was no morbid appearance.

Montreal, August 24, 1846.

CASE OF HYDRORACHITIS.

By R. W. Evans, M. D., Richmond, C. W.

To the Editors of the British American Journal.

August 7, 1845.—Mrs. M——— requested me to visit her child, aged 8 months. The nurse stated that she observed a small tumour on the lower part of the spine immediately after the child was born. On examination I found it situated on the 4th lumbar vertebra; it increased very much in size up to the present time, and is now about the size of a goose egg, bearing all the marks of a case of Hydrorachitis, or Spina Bifida of the "Arabians." On pressing the tumour, fluctuation was quite perceptible, and on examination seemed to be transparent and elastic. The head of the child was very large, of an oblong shape, and appeared to be hydrocephalic; legs were insensible and almost paralytic.

The mother was informed that it was a disease of great danger and generally incurable.

Treatment as follows.—On the 8th of August, 1845, I punctured the tumour by heated needles, 8 in number, after which I dressed the part with "charpee," saturated with the tinct. of Iodine, and applied a bandage. I continued this application for seven days, when the tumour seemed to be very much diminished. The child was a little feverish; pulse 130. Ordered a warm bath and an aperient of Ol Ricini. August 14th.—Punctured the tumour a second time, and continued the dressing as above stated, with the addition of a piece of pasteboard which I applied over the dressing and confined in "situ" by a bandage. I removed the dressing every fourth day, at the same time painting the tumour with the tinct. of Iodine and applied the dressing as above.

This treatment was continued for six weeks when the tumour completely disappeared, leaving the skin shrivelled up over the situation of the tumour. The head became diminished in size, and the general health good. It is now nine months since, and there is no appearance of the tumour.

I was prompted to use heated needles in consequence of seeing various aneurisms by anastomosis cured by their application.

July 10, 1846.

Carbonate of Iron with Sulphate of Quinine in Intermittent Fever.—Prof. Lippich of Berlin recommends the following formula:—Carbonate of Iron, 1 gramme; Sulphate of Quinine, 1 gramme; Ext. Taraxici, q. s.,—to be made into a mass, which is to be divided into 30 pills, two of which are to be taken every two hours. The Carbonate of Iron may be afterwards increased.—*Gaz. Med. de Paris.*

PRACTICE OF PHYSIC AND PATHOLOGY.

OBSERVATIONS ON THE SEAT AND NATURE OF CHOREA, AND ON THE USE OF THE OXIDE OF ZINC IN THIS DISEASE; WITH CASES.

By O'B. Bellingham, M.D., one of the Medical Officers of St. Vincent Hospital, &c. &c.

Chorea is one of the few diseases, with the seat and nature of which we are still very imperfectly acquainted, and the pathology of which remains in a very unsatisfactory state. The disease being seldom fatal, the opportunities for examining subjects who have died while laboring under it have been comparatively few, and even in these the morbid appearances have presented nothing like uniformity.

The seat of chorea has been hitherto generally sought for somewhere in the nervous centres; and the disease has been supposed to depend upon an abnormal condition of some portion of the cerebrum, cerebellum, or medulla spinalis. This opinion was founded on the facts that in chorea, as in hemiplegia, one side only of the body is in many cases implicated; and its symptoms bear a faint resemblance, partly to those of paralysis, and partly to those of convulsion. The researches of the French pathologists having apparently shown that the cerebellum and corpora quadrigemina preside over, or regulate locomotion and progression, it was expected that the seat of chorea would be found in these parts of the brain; and this theory seemed to acquire confirmation from the investigations of M. Serres, who, in four fatal cases, found evidence of disease in or about these parts. But subsequent observers have not succeeded in detecting any similar lesions; or in demonstrating any connection between chorea and disease, either of the cerebellum or of the corpora quadrigemina.

If chorea did really depend upon a morbid state of the brain, spinal marrow, or any important internal organ, it is hardly to be supposed that we should hitherto have altogether failed in discovering it, more particularly as pathological anatomy has been cultivated for a considerable number of years with so much ardour. Indeed, when we consider the transient nature of chorea, that it occurs almost exclusively between the age of eight and fifteen; that it is much more frequent in the female than the male; that it is never fatal when uncomplicated; and that after persisting for a certain length of time, it will generally subside of its own accord, it is but reasonable to conclude that the seat of the disease is neither in the nervous centres nor in any other vital organ.

By the older authors, chorea was looked upon as a variety or form of paralysis, but by the majority of writers of the present day it is included among spasmodic or convulsive affections. It does not, however, properly belong to either class. By the term paralysis, we understand an entire suspension of the power of the will over the voluntary muscles; while spasm or convulsion is a sudden, strong contraction, or alternate contraction and relaxation of the voluntary muscles, occurring altogether against the will. In chorea, on the other hand, the involuntary movements are such as might take place voluntarily; the balance or association in the motions of the voluntary muscles is deranged or disordered, and the power of the will over the muscles is impaired rather than altogether lost; for unless in aggravated cases of the disease, the involuntary motions can in some measure be controlled by an effort of the will, and in all cases they are suspended during sleep. Chorea, therefore, may be said to consist in *an excess of mobility* of the voluntary muscles, and in an inability in these parts to preserve the same position, or to remain in a state of repose even for a short period.

When chorea is general and severe, the voluntary muscles are in a state of almost perpetual motion, the body is thrown into the most grotesque attitudes, and the patient's arms are jerked about without his appearing to have any control over them. In the majority of cases, however, and always when the chorea is partial, the patient retains some control over the voluntary muscles, but he cannot maintain it for any length of time, and almost as soon as one set of muscles is brought into action by an effort of the will, their antagonists come into play. For instance, if we desire the patient to protrude his tongue, he will do so; it may be after various contortions of the muscles of the face, but we can not retain it in that position, it will be suddenly and involuntarily retracted. If he grasps an object with the hand, the extensor muscles will unconsciously come into play, and it will fall to the

ground. If he attempts to convey a morsel to his mouth, many fruitless attempts will probably be made before he succeeds.

Indeed the involuntary and extraordinary motions which characterize the aggravated form of chorea has led to its being regarded as an analogous derangement of function in the voluntary muscles to what we observe in some forms of derangement of the intellectual functions. In other words, "chorea (M. Bouillaud remarks) may be said to be to the functions of the voluntary muscles what certain forms of insanity are to the intellectual; it appears to constitute a state which may be called *folie* of the muscles." The analogy, however, is rather far fetched, the functions of the two systems being so opposite; but the idea is not new; for in the earlier ages, individuals the subject of chorea were supposed to be bewitched.

In investigations into the seat of chorea, the attention of pathologists (as I have already shown,) has been in a great measure turned away from the parts actually engaged in the disease, and up to the present day almost, the muscles, "though the suffering organs," have been nearly altogether overlooked; while the nerves which supply these parts have been exclusively regarded, or the disease has been supposed to have its origin in irritation of some other part. It may, therefore, be questioned whether our efforts hitherto have been in the right direction. The only author that I am aware of who has called attention to this point, is Dr. Wilson. In his work on "Spasm, Languor and Palsy," he has urged the importance of investigating the state of the blood in these diseases; as upon its healthy or unhealthy condition he believes the healthy or unhealthy discharge of the functions of the muscles depends. "The muscles (he very properly observes) are to be viewed, not merely as organs of motion, as ministering only to an occasional and mechanical function; but collectively as the most extensive of living structures, continually employing and employed upon a large proportion of the entire mass of the blood. The muscles indeed in their constant function of nutrition are with respect to the blood as glands, ever busy in separating from it the materials of their own growth, and restoring it in an altered state to the general current of the circulation."

Again, in another place, he observes,—"in the practical application of these principles to the treatment of muscular disorder, we find that great advantages are actually obtained by addressing our remedies to the muscle through the wide current of the blood that pervades its entire texture, rather than by seeking to influence the structure through the exclusive agency of the nerve. By extending the supply of blood to the muscle, sometimes by reducing it, by removing hurtful principles from the circulation, or by restoring those which are inherently wholesome, we do in truth best control the symptoms of muscle disorder.

This appears to be the most rational view to take of chorea, and it is that which most probably will ultimately be found to be correct. Chorea should, therefore, be regarded as a *muscular*, not a nervous disorder; and its cause is to be sought for, not in the nerves or nervous centres, but in the blood; altered states of which very probably occasion the derangement in the functions of the muscle which characterize the disease. What this altered condition of the blood may be, cannot of course be exactly demonstrated; it may be presumed that this vital fluid is impoverished, because chorea generally is observed in individuals in whom the function of nutrition is defective, or who present the ordinary signs of debility. But in addition, there is probably some further alteration which predisposes the muscular system rather than any other to sympathize with the disorder of the general system.

That the muscular fibre should be disposed to derangement of its functions at the age at which chorea generally occurs might be presumed, because anything which interferes with its nutrition in early life must be more prejudicial then, than at more advanced periods. Now chorea attacks almost exclusively young persons who have not arrived at puberty; at this period of life the voluntary muscles are far from having acquired their perfect development, and nutrition must be active to constitute a state of health. As long as the arteries continue to carry an adequate supply of fibrine to the muscular tissue, its growth will proceed, and the functions of the muscles will be performed with vigour; but if the individual is either badly fed, or over fed, or if nutrition is defective from any other cause, the arterial blood becomes incapable of furnishing the necessary material, or its constituents may be altered from the healthy standard. Under such circumstances the functions of the voluntary muscles are very likely to be performed imperfectly, or their motions to be deranged or disordered, and chorea may be developed in a subject, in whom in after life the same exciting causes would call into action a different disease.

This view of chorea might be objected to, as it apparently overlooks the influence of the nervous system in the production of disease: but it really does not. We all know that muscular contraction is the result of nervous communication between the sensorium or the medulla spinalis, and the muscles; and that the performance of the functions of the voluntary muscles depends upon the integrity not only of the nerves which supply them, but also of the part of the brain or spinal marrow from which they proceed. We likewise know that injury or disease of the parts from which the nerves take their origin will produce disordered action in the muscles they supply, and that similar or nearly similar effects may follow an injury of the opposite extremity of a nerve. But pathology discovers no change of structure or injury of the nervous centres or of the nerves themselves in chorea; and observation shows us that the phenomena of this disease are very unlike those which characterize either of the morbid states which I have mentioned. Analogy would therefore lead us to infer that the seat and cause of chorea are different; and everything points to the muscle, not the nerve as its seat. That its cause lies in some alteration of the blood, which medical chemistry may eventually elucidate, appears also to be the most probable conjecture.

The treatment of chorea has proved more successful than could, *à priori*, have been expected, when we consider how defective have been the theories of its origin and cause, and how much obscurity has prevailed respecting its pathology. But it must be borne in mind, that chorea, after persisting for a certain length of time, tends gradually to subside, and will disappear under favorable circumstances through the unaided efforts of nature; and when, in addition, the most opposite modes of treatment are stated to have been pretty nearly equally successful, it may be fairly questioned whether the results were the effect of the remedies employed, or of the *vis medicatrix naturæ*.

The treatment of chorea has hitherto been in a great measure empirical; remedies have been prescribed without any fixed principle, or according to the various views of its pathology advocated at different periods, or by different individuals. As the disease often occurs in delicate or debilitated subjects, a line of treatment calculated to improve the general health has been frequently employed, and with sufficiently satisfactory results. Debility cannot, however, be regarded as an exciting cause of chorea, because the disease is almost limited to young persons between the age of eight and fifteen, and it is occasionally observed in patients who present none of the ordinary signs of this state.

By many chorea is vaguely defined to be a nervous, convulsive, or spasmodic affection; and it is looked upon as nearly allied to hysteria or connected in some way with derangement of the uterine functions, and it is treated by antispasmodics or emmenagogues. But that it is not a spasmodic or convulsive disease, in the proper acceptation of these terms, we have already seen; and that it cannot be supposed to depend upon derangement of the uterine functions, is proved by its frequently occurring in the male sex.

Some theorists look upon every disease as the result of inflammation of an acute or chronic character; and as chorea is occasionally ushered in or accompanied by headache, pain in some part of the region of the spine, &c., it has been regarded as depending upon inflammation or something nearly approaching this state of some portion of the nervous centres, and it has been treated by bleeding, locally and generally, by counter-irritation, &c., &c. But that chorea is not an inflammatory affection is sufficiently apparent from the absence of all the ordinary symptoms of inflammation, from the little danger which attends the disease, and from other circumstances too obvious to require to be mentioned.

Other theorists would appear to consider the alimentary canal as the seat of chorea, as of several very dissimilar diseases, and they suppose its cause lies in the irritation occasioned by the presence of fœculent matter lodged in the intestines. According to their idea, chorea is therefore to be treated by causing frequent and copious evacuations from the bowels. This theory, above all others, has proved the most mischievous in practice; its apparent simplicity, and the facility with which it could be acted on, has caused it to be extensively adopted, particularly as it coincided in some measure with popular prejudices, and came recom-

mended by high authority. Constipation is not, however, even a necessary accompaniment of chorea; the bowels are often perfectly regular in the very worst cases of the disease; and if they are confined, this probably depends upon want of tone in the system, or upon some other circumstances; it is never the exciting cause of the disease, nor will its removal cure it. Numerous cases certainly have been reported in proof of the efficacy of the purgative plan of treatment, but the majority of these only prove that the powers of the patient's constitution were equal to meet both the disease and the remedy.

Although the frequent and continued employment of purgatives in chorea should be proscribed, a single dose of a cathartic will often be advisable at the outset, in order to remove morbid secretions or fœcal accumulations, the presence of which, by interfering with nutrition, would tend to increase debility, and an occasional purgative may be necessary afterwards; but beyond this they are likely to prove more injurious than useful, and diarrhœa, even when it occurs spontaneously, instead of promoting, retards the recovery of the patient.

The medicines which at the present day are usually relied upon in the treatment of chorea, belong to the class of tonics, and the mineral tonics are generally preferred to those derived from the vegetable kingdom; among these the preparations of iron have long held the first place, their efficacy having been proved in repeated trials. The subcarbonate of iron of the pharmacopœia was particularly recommended in this disease by Dr. Elliotson, and it has frequently proved successful in his hands, and in the hands of many other practitioners. The efficacy of iron in chorea would appear to afford corroborative evidence that the blood has undergone some change in this affection, because iron is almost a specific in anœmia, in which disease we know this fluid is deficient in one at least of its most important constituents.

In the accompanying cases, the oxide of zinc was employed. I was induced to try this medicine in chorea, partly because I had occasionally found the preparations of iron to disagree, (occasioning headache, hot skin, foul tongue, and constipation,) and partly because the oxide of zinc formerly had some repute as a tonic in this and some other diseases, though of late years it had almost completely fallen into disuse, having been superseded by newer or more fashionable remedies. The largest dose of the oxide of zinc which I have found necessary is twelve grains; in general, smaller doses were employed. In a few cases it occasioned nausea or pain referred to the epigastric region; it was then given in combination with an aromatic; more frequently it acted as a purgative, and it was found necessary to combine it with an astringent, as prepared chalk, &c.: the latter effect is not generally supposed to be produced by the oxide of zinc; but I have witnessed it on many occasions; in some cases, indeed, the intermission of the medicine for a few days was necessary.

The following cases form only a portion of those in which the oxide of zinc has been employed, and they are given because more accurate notes happened to have been taken of them than of the others, not because there was any difference in the results of the treatment. I have no intention, however, of claiming for this medicine a higher degree of virtue than it is entitled to. It will be seen that in several of the following cases, the shower-bath was employed, and in all the diet was more generous than the patients probably had been previously accustomed to; the administration of the oxide of zinc was likewise combined with all the advantages which could be expected to result from change of residence, perhaps from an unhealthy, confined, and dirty habitation, to a comfortable, clean, and healthy one—from change of air, of scene, of habits, and other circumstances. These are matters which are not always sufficiently taken into consideration in noticing the curative virtues of any particular remedy; but they must have considerable influence in many chronic diseases, and the successful results may probably in many instances be attributed as much to them as to the particular medicine employed.

CASE I.—GENERAL CHOREA IN A VERY SEVERE FORM—TREATMENT WITH THE OXIDE OF ZINC—RECOVERY.

Margaret Healy, a thin delicate looking girl, ætat. 14, admitted into hospital May 26, 1846. Illness of five weeks' duration, commenced suddenly with vomiting, pain in lumbar region, and headache. Soon afterwards she was observed to have partially lost the use of the right arm, and the leg was dragged in walking; the opposite extremities then became engaged; the speech was affected early, and the muscles of the neck and trunk soon afterwards. She has been confined to bed for the last four weeks, having been unable either to walk, to feed, or to dress herself. The face is pale, and has somewhat a fatuitous expression, the appetite is bad, the tongue coated, and the bowels are confined. She is a servant, and attributes her illness to hard work.

A cathartic bolus was directed to be taken at night, followed by a dose of purgative mixture; cupping to painful part of spine to six ounces.

30th. No pain in head or lumbar region; expression of countenance better; speech also improved slightly; tongue clean; when protruded quickly retracted: appetite improved; is able to walk now a short distance.

℞ Oxidi zinci.
Sacchari albi aa grana iij.
Fiat pulvis ter die sumendus.

June 2nd. Is up daily, and is able to walk without assistance; involuntary motions of upper extremities much diminished.

9th. States that the medicine has acted much upon the bowels; countenance pale; tongue clean; appetite good.

A little prepared chalk was directed to be added to each dose of the medicine.

11th. The diarrhœa has been checked, and the countenance is much improved.

A tepid shower-bath daily, to be gradually used cold.
Sumat. oxidi zinci grana v. ter in die.

16th. The increased dose has again caused purging; the shower baths have been continued regularly. The patient now has good use of the upper extremities, and in a few days afterwards considered herself well enough to leave the hospital.

CASE II.—GENERAL CHOREA IN A VERY SEVERE FORM—TREATMENT AT FIRST WITH THE SUBCARBONATE OF IRON, AFTERWARDS WITH THE OXIDE OF ZINC—RECOVERY.

Catherine Corrigan, ætat. 8, admitted into hospital January 1, 1846. Illness commenced five or six weeks since with pain referred to both the head and abdomen. A fortnight ago when she was eating her breakfast it was observed that she had lost in some measure the control over the motions of the right arm; very soon afterwards the right leg became affected; in two days more it extended to the left upper and lower extremities; a week since her speech became thick, and she is now quite unable to articulate; the involuntary motions are said to diminish but not to cease during sleep.

On admission she was unable either to sit, stand, or speak; the upper and lower extremities upon both sides were in constant motion; the trunk, neck, and face were also engaged; there was considerable difficulty in swallowing solids. Tongue furred; bowels confined; appetite bad; skin hot; expression of countenance vacant; appears to suffer from pain in the abdomen, which is increased by pressure.

A cathartic powder was directed to be taken at night, followed by a purgative draught in the morning.

3rd. Still appears to suffer much pain when slight pressure is made upon the abdomen; points also to the head when questioned as to the seat of pain; medicine acted well; no change in other symptoms.

Haustus olei ricini cum spirit. terebinth.

6th. No pain in abdomen now; is still apparently suffering from pain in head; a leech had been applied to the inside of the nostril with slight relief. She appears also to be suffering from pain at the back of the neck.

Admoveantur hirudines ij. nuchæ capitis.

℞ Sub. carb. ferri sacch.
Bicarbonatis sodæ aa. grana duo.
Pulveris aromat. granum.
Ft. pulvis ter in die sumendus.

8th. Involuntary motions continue uninterruptedly during the day, but subside when asleep: sleeps well now.

A tepid shower-bath daily, to be gradually used cold.

20th. The medicine began to disagree with the patient, and was consequently discontinued.

℞ Oxidi zinci.
Sacchari albi aa grana iij.
Ft. pulvis ter in die sumendus.

Soon afterwards the dose was increased to five grains three times a day; it produced no effect upon the bowels; the little patient was soon able to sit up, then to stand and to speak, while the involuntary motions diminished considerably.

February 12th. The patient is now able to walk and speak;

the countenance is cheerful and healthy looking; the motions in the arms are slight, and she can hold objects in her hands. The medicine produces no sensible effect.

26th. She left the hospital this day perfectly well, having continued to take the medicine regularly; she had grown strong and looked healthy.

CASE III.—PARTIAL CHOREA ENGAGING PRINCIPALLY THE RIGHT SIDE OF THE BODY—TREATMENT WITH THE OXIDE OF ZINC—RECOVERY.

Maryann Gaynor, aged 14, admitted into hospital February 8th, 1845. States that she had always enjoyed good health previous to the present attack, which commenced six weeks since in the right arm, two days afterwards the right lower extremity became engaged, and about a week subsequently the left arm. Knows no cause to which her illness can be attributed. On her admission the right side of the body was principally affected, progression was difficult, and she was unable to use the right arm; the speech was thick, the muscles of the face, those of the tongue and of the left arm, were also engaged, but in a less degree; appetite good; tongue clean.

A cathartic bolus was directed to be taken at night, followed by a purging draught in the morning; cupping to back of neck to four ounces.

11th. ℞ Oxidi zinci grana iij. ter in die. A tepid shower-bath daily, to be gradually used cold.

15th. Has had diarrhœa since she commenced the medicine. Five grains of prepared chalk were therefore directed to be added to each dose.

25th. The diarrhœa has subsided; the speech is not at all affected now, and the patient is able to use her hands; the involuntary motions are less; she uses the cold shower-bath daily; the dose of the oxide of zinc was increased to six grains.

March 8th. The patient is greatly better, being now able to feed and dress herself. The dose of the medicine had been increased to ten grains three times a day, it is given still in combination with a little prepared chalk, as it always otherwise acted upon the bowels.

15th. The involuntary motions have almost altogether ceased; the patient's general health is perfectly good. The medicine has been taken regularly, and the dose latterly had been increased to twelve grains. Shortly afterwards she was dismissed.

CASE IV.—PARTIAL CHOREA ENGAGING PRINCIPALLY THE UPPER EXTREMITIES—TREATMENT WITH THE OXIDE OF ZINC—RECOVERY.

Mary Neil, aged 14, admitted into hospital July 27th. States that she laboured under chorea three years ago, the right side of the body was then affected, and the attack lasted about six weeks. Present illness commenced five or six weeks since, and came on gradually: the upper extremities are principally engaged, the lower are affected also, but in a much less degree. Says she suffers from pain in the head and back occasionally, but has none now; when strong pressure is made upon the spine in the lumbar region it occasions pain. The appetite is good; the tongue is clean; the bowels are regular: and she appears to be healthy.

Sumat. oxidi zinci grana v. ter in die.

31st. Medicine has had no sensible effect; the dose to be increased to six grains.

August 8th. Symptoms slightly diminished; no other effect from the medicine. Dose to be increased to eight grains three times a day.

10th. Complains of some pain in the region of the stomach; a little powdered ginger was therefore added to each dose of the medicine.

20th. A tepid shower-bath for a day or two, to be afterwards used cold.

September 12th. The patient has continued to take the medicine regularly; she uses a cold shower-bath daily, and has been free from any symptom of chorea for a week. Dismissed.

CASE V.—GENERAL CHOREA IN A VERY SEVERE FORM—TREATMENT AT FIRST WITH THE SUBCARBONATE OF IRON. AFTERWARDS WITH THE OXIDE OF ZINC—RECOVERY.

Patrick M'Dermott, aged 12, admitted into hospital March 23rd. He had always enjoyed good health previous to the present illness, which commenced about four months ago. At that time he began to experience a difficulty in holding anything small in his hands. Two months subsequently involuntary twitchings of the muscles of both arms set in; about a month afterwards he had nearly lost all control over both the upper and lower extremities.

On admission, the report states that he is unable to walk, to feed, or dress himself, he cannot articulate correctly, laughs and protrudes the tongue involuntarily, and makes all sorts of grimaces. Appetite good; tongue clean; bowels regular; the face is pale, and he has an emaciated unhealthy appearance.

After a purgative, the precipitated subcarbonate of iron was directed in the dose of a drachm three times a day. Subsequently the dose was increased to two drachms three times a day.

April 13th. No improvement in symptoms: he complains now of pain in the head and loss of appetite; the bowels are confined, and the skin is hot.

A cathartic bolus was directed, followed by a purgative draught.

16th. Sumat. oxidi zinci grana v. bis in die.

30th. The dose has been increased to eight grains three times a day: he complains now of some sickness of stomach; improving in other respects. A little Dover's powder to be added to each dose.

May 3rd. As he still complained of nausea the medicine was discontinued for a few days. It was recommenced on the fifth in a smaller dose, and each dose was combined with a gram of Dover's powder.

25th. The patient continues gradually to improve, he now takes eight grains of the oxide of zinc three times a day.

June 2nd. The medicine has been taken regularly, the disease has quite subsided, and the patient left the hospital very shortly afterwards.

ON SYPHILITIC INFLAMMATION OF THE EYE.

By A. Jacob, M. D., F. R. C. S. I., Professor of Anatomy and Physiology in the Royal College of Surgeons, and one of the Surgeons of the City of Dublin Hospital.

The depositions of lymph and other changes in the organization and appearance of the iris are thus noticed by Mr. Lawrence—"The change of color which the organ undergoes is one of the most striking characters of iritis. A light colored iris assumes, under inflammation, a yellowish or greenish tint; occasionally, it is distinctly yellow; and, if the eye be blue, a bright green is sometimes seen. Generally, however, the tint, whether yellow or green, is of a dull and muddy cast, and darker than in the sound state. In case of the iris being naturally dark colored, it presents, when inflamed, a reddish tinge. Together with these changes of color, there is a complete loss of its natural brilliancy; it becomes dull and dark, and the beautiful fibrous arrangement, which characterizes it in the healthy state, is either confused or entirely lost. These changes which are rendered particularly obvious by the contrast between the inflamed and the sound eye, commence in the pupillary margin. In an early period, the very edge of the pupil alone may be affected; the internal circle then becomes altered in color, and thickened; and afterwards the change spreads gradually to the external or ciliary edge of the iris. This alteration of color is produced by effusion into the texture of the organ: and the particular tint is such as would arise from blending with the natural color of the iris that of the lymph, which is yellowish or brownish. The deposition of lymph takes place under various modifications in syphilitic iritis; 1st, its effusion into the texture of the iris generally causes the changes of color just described. 2ndly, it may be deposited in a thin layer, covering a larger or smaller surface. In this way, the edge of the pupil first, and subsequently the lesser circle of the iris assume a reddish brown or rusty color in the beginning of the affection. The discoloured part has a rough villous appearance, when closely inspected, and we shall generally find, on careful examination, more particularly on looking at the part sideways, that slight elevation and irregularity of surface are produced by this new deposit. Sometimes the stratum of lymph has a light yellowish brown or ochrey tint, and a loose villous texture, rising into obviously prominent masses. The rusty color is the most common, and is observed particularly in blue irides; the other is seen in the gray, or the mixture of gray and orange. This kind of deposit is generally confined to the inner circle of the iris; but the outer circle is usually, at the same time, more or less discolored and dull. 3rdly, the lymph may be effused in distinct masses—that is, in small drops or tubercles of a yellowish or reddish brown color! sometimes they are of a bright red, and sometimes yellowish. They vary in size from that of a pin's head to a split pea. Often there is only one; there may be two, three or more. They may be deposited on the edge of the

pupil, or in any part of the anterior surface of the iris. When the inflammation is very active, and has been neglected or improperly treated, the lymph is sometimes secreted so abundantly as nearly to fill the anterior chamber; in which case it has a light dirty yellowish tint, and often a looseness of texture, with semi-transparency. 4thly, under violent inflammatory action blood itself is sometimes effused, and is mixed, in a coagulated state, with the tubercular masses of lymph. I have seen such effusion of blood where the inflammation has not been of the most violent kind. 5thly, lymph may be poured out from the margin of the pupil or the uvea, so as to agglutinate them partially or generally to the capsule of the crystalline. A mass of lymph sometimes fills the pupil. More commonly, a thin grayish web or film stretches across the opening, which loses its clear black color, and has a cloudy appearance. Lymph may be infused in considerable quantity into the posterior chamber, and either make its way through the pupil into the anterior chamber, cause a bulging of the sclerotica, or penetrate that membrane, and form a tumour under the conjunctiva. I have already said that the yellow or bright green tint above alluded to by Mr. Lawrence is as often observed in idiopathic inflammation or after injury as it is in syphilitic iritis: it cannot therefore be considered a characteristic symptom. The effusion of blood which he notices also takes place in other forms of inflammation of the iris, and perhaps more frequently than in this. It is a very remarkable consequence of inflammatory action, and should have been noticed when I was describing the symptoms of acute inflammation of the eyeball, and the changes in the structure of the iris from progressive inflammation. It occurs, however, but rarely, and I think oftener in eyes that have previously suffered from inflammatory action, and in aged or debilitated persons. The effused fluid is obviously blood, for it stains or tinges the aqueous humour, and subsequently forms a coagulum in the lower part of the anterior chamber, or falls down in the same shape as a purulent hypopyum, and is ultimately absorbed. The greater depositions above alluded to, as making way through the pupil into the anterior chamber, causing a bulging of the sclerotic, and forming a tumour under the conjunctiva, do not take place in syphilitic inflammation exclusively, but are rather a consequence of scrofulous disease, as I shall have to notice hereafter.

All the consequences already enumerated as following simple inflammation of the eye are also observed in syphilitic inflammation. There are the irregularities, contractions, and adhesions of the pupil, the loss of contractile power in the iris, and in neglected or mismanaged cases, cataract both capsular and lenticular, with disorganization of the retina and consequent amaurosis. In the worst cases the shape of the eyeball is altered: the sclerotic yields or bulges irregularly, or the cornea is projected forward, as in a bird's eye. In other cases the whole globe shrinks or contracts, the cornea is diminished in size, and the eyelids fall into an unfilled orbit.

In the treatment of syphilitic inflammation of the eye it appears to be admitted on all hands that, whatever confidence we repose in other remedies as auxiliaries, our principal reliance is on mercury. Not only is it relied on for the cure of the specific disease, of which the iritis is a symptom or part, but, as in simple uncomplicated inflammation of the eye, for the reduction of inflammatory action and prevention of its consequences. Whatever difference of opinion may be entertained respecting the necessity of resorting to mercury in other forms of syphilis, the effects of the disease on the delicate structure of the eye are too serious to permit of any hesitation or temporizing. It also appears to be admitted that it is in this species of iritis mercury displays its power most conspicuously. There is not in fact to be found in the whole range of surgical practice a more remarkable example of the remedial influence of a medical agent on disease than that observed in the treatment of syphilitic iritis by mercury. In a few days it, and it alone, will in a recent case, and in a constitution otherwise healthy, arrest an active inflammation, which otherwise will, most probably, proceed unchecked to the destruction of the organ. I have already, when describing the treatment of inflammation of the eye, fully considered the use of mercury, the form and quantity in which it should be administered, and the length of time during which it should be continued. It is therefore unnecessary to repeat these observations, neither is it necessary here to consider how far the practitioner should avail himself of the opportunity afforded him in thus treating one form of secondary syphilitic disease to persevere with the remedy for the total eradication of the malady from the system.

I have reserved the consideration of turpentine as a remedy in the treatment of inflammation of the eye until the present stage of the inquiry, because it has been more particularly recommended in syphilitic iritis; yet it is perhaps in this very form that it is least likely to be fairly tested, the practitioner having a double inducement to prefer mercury, from its known efficacy in venereal diseases, as well as from its effects in simple inflammation. It is also on account of the acknowledged value of mercury that turpentine, although recommended fifteen years ago, has not yet had a fair trial. The practitioner, in simple, recent, uncomplicated cases, naturally prefers the medicine he has known to succeed under similar circumstances, and only resorts to the other where he finds that the former does not succeed, or that for some particular reason he cannot employ it. Influenced myself by such considerations, I cannot say that I have fairly tested turpentine as a remedy in the treatment of inflammation of the eye, except as an auxiliary or resource in the failure or unfitness of mercury, to which extent I can bear testimony to its value. This being the case, I consider it best to quote the arguments and statements in its favor offered by Mr. Hugh Carmichael of this city, who first called attention to it in an essay on the subject published in 1829:

"The attention of the profession has been in so many instances directed to the administration of turpentine in peritoneal inflammation, that the claims of that medicine to our notice, as a valuable remedy in this complaint, may at present be considered fully established. The number of cases recorded in the different periodical journals which have yielded to its exhibition, render it unnecessary here to make any further remark on the subject.

"If we observe the nature of the parts which are the seat of peritonitis, the description of inflammation that engages them, and the subsequent morbid appearances, and compare all these circumstances with those to be met with in iritis, strong grounds will, I think, appear for presuming that in many points a striking similarity may be traced between them; in both a serous membrane is engaged, and in both the adhesive inflammation is to be seen producing adhesions between surfaces intended by nature to be free. It is true that the two diseases occur in parts of the body very different from each other in many respects; and it is likewise true that this material difference is supposed to exist between them—namely, that while peritonitis is a simple idiopathic disease, iritis on the contrary, in its different varieties, but particularly in that which follows syphilis, is thought to proceed from a peculiar constitutional taint, and consequently to participate in its peculiar nature: but even admitting this difference, their characters nevertheless unquestionably coincide in these essential points, that in each the adhesive inflammation, and its consequences, are the morbid appearances to be observed.

"Under this impression I was induced to make trial of turpentine in iritis, conceiving that where such similarity of appearances were met with, as those just mentioned, a medicine possessing any control over them in the one situation, might probably be productive of some benefit in the other; a few cases were, therefore, submitted to its influence, and the results were such as to confirm the idea I had formed: the first trial was in 1824.

"I use the turpentine in this complaint in drachm doses, given three times a day. Its disagreeable flavour and nauseating effects I have found best obviated by almond emulsion. This circumstance it is very necessary to attend to, the medicine being so unpleasant, that, if its taste be not in some way disguised, it is difficult to depend on patients taking it with the necessary regularity. In the formation of the emulsion, if double the quantity of confection directed in the London pharmacopœia be employed—that is, two ounces to the half-pint of water, it answers the above objects much better: the residuum may be removed by straining.

"With an emulsion so made, the following is the formula I now generally adopt:

℞ Olei terebinth. rectificat. ℥i
Vitelli unius ovi tere simul et adde gradatim.
Emulsionis amygdalarum, ℥iiij.
Syrupi corticis aurantii, ℥ij.
Spiritus lavandulæ compositæ, ʒiiij.
Olei cinnamomi guttas tres vel quatuor.
Misce, sumat cochlearia larga duo ter de die.

"In a few cases it has been necessary to increase the quantity of turpentine to an ounce and a half, or two ounces, in the above mixture, the other ingredients being proportionally diminished, so

that a drachm and a half, or two drachms of it may be taken each time; but in general, when administered to the extent directed in this formula, it has very seldom indeed failed, though extensively tried, and in very urgent cases: the instances of its failure shall be presently noticed.

"The strangury, so frequently induced by the internal use of turpentine, is obviated by the usual means—flaxseed tea and camphor julep: when very urgent, the medicine may be suspended for a time. The tendency to acidity in the stomach, which it sometimes causes, is relieved by the addition of carbonate of soda to the mixture; ten or fifteen grains to the eight ounces will be sufficient; some patients have said, the taste was further disguised by this addition.

"When the local inflammation is high, and acute pain is present in the eye and side of the head, the abstraction of blood from the temple, by cupping, or the more immediate seat of the disease, by leeching, may be resorted to: the same practice is adopted where mercury is used. Nevertheless I have frequently, when these symptoms were very urgent, relied solely on the turpentine mixture, and with the most decided and expeditious relief; indeed in some instances, where the pain and hemicranium existed as acutely as they are perhaps at any time to be met with, patients have declared they were considerably relieved after they had taken it once or twice, and that its subsequent exacerbations were lessened in a very remarkable degree. It is in the former cases I have generally found it necessary to follow up the bleeding by increasing the quantity of the turpentine.

"It is highly necessary to observe, that the condition of the bowels will require attention; the beneficial effects of the medicine appear to be in certain cases suspended when constipation is present, and are called forth, as it were, when this is removed.

"Perfect rest, if not absolutely material, will at least be found most conducive to the complete production of its salutary effects. In a few cases where patients, from their particular situations in life, were obliged to continue in active employment, the same satisfactory results did not follow its exhibition, nor was its influence fully established until this was attended to.

"When all the other symptoms of the disease have subsided, except a slight remaining indistinctness of vision, I do not consider it necessary to continue the medicine farther; some time is generally necessary for the complete removal of this; but the powers of the system may be relied on for its accomplishment. Wherever I had an opportunity of examining patients who had been dismissed with this indistinctness of vision, I have always found them to have been quite relieved from it a short time after they were so discharged.

"In some of the following cases, particularly the first of them, it will be seen that sedatives were employed along with turpentine, such as opium, henbane, and cicuta; but it is almost needless to add, that they could not have any share in the cures which took place in these cases. The same description of medicine—namely, opium, is also used, and pretty extensively, when mercury (calomel) is the treatment adopted; but the removal of the disease under it is entirely attributed to the latter, the former being conjoined with it for the purpose of detaining it in the alimentary canal, and thereby promoting its absorption into the system; or it may also have the effect of allaying severe pain, and with which view they were exhibited in the cases they were here employed in; in this way they may sometimes be serviceable.

"By these means the administration of turpentine has very seldom indeed failed in effecting a perfect cure, the amendment being generally quite perceptible the day after it had been commenced with, as may be readily conceived, from the well known quickness with which it pervades the system: I must, however, observe that, in a very few instances it was not attended with such marked success; and, although in my own opinion, its failure in them may be attributed to other causes than its inefficacy, I consider it right, however, to notice them here.

"In the syphilitic, as already remarked, its effects appear to be most decided; I mean when accompanied by those symptoms already mentioned, and which are considered as characterizing that species of iritis, relying very much on it in those attended with low and partial inflammation of the sclerotic coat.

"On the other hand, in a few cases where this inflammation was very acute, of a florid red colour, deeply and extensively engaging that membrane, the conjunctiva also inflamed, so as to form a network of vessels, obscuring more or less the former tunic from view, and instead of forming the zone, already mentioned, at a short distance from the cornea, encroaching thereon, I did not succeed in completely removing the complaint by its administration, though it certainly arrested its progress.

"Again, in that description which occurs after fever, it sometimes was not satisfactory in its results. However, in making this statement, I must remark, that in many cases attended by the above appearances, it has effected a perfect and decided cure, and in several of those following fever, when mercury and all other means were unsuccessful, its removal was ultimately accomplished by the use of turpentine alone.

"But in speaking of those few unsuccessful cases, I have to observe on the difficulty so frequently experienced in dispensary practice, where I principally made my observations on this subject, in having our directions attended to with that strictness which may enable us to form correct opinions on the effect of any medicine. I have witnessed this negligence even in hospital practice, and had some doubts of the result for a time, till close attention discovered the medicine was not regularly taken by the patient, and on enforcing its administration in the mode I directed, the usual beneficial consequences followed; I am therefore led to imagine in those cases where turpentine did not succeed, that its failure is to be attributed to neglect on the part of the patient, rather than want of efficacy in the medicine; for without this explanation how can we account for the very same description of cases being attended in others with decided and complete success. If, however, the fact be, that some cases are not quite amenable to its influence, I am at present unable to make a distinction further than I have stated: perhaps future trials may enable me to be more explicit. Can idiosyncrasy be the cause, rendering the turpentine in these particular cases less efficacious than what it generally is?

"However this may be, in introducing to the profession a description of treatment which is novel in the disease, I think it necessary not only to give a full account of the manner I have conducted it, but likewise the true results derived from it, according to my experience; and I have therefore stated, that in some few cases (and these very few) the administration of turpentine was not attended with the decided success I generally found it to obtain in others, and have also described the appearances which presented themselves in the unsuccessful cases.

"The great error generally committed by persons bringing forward any new mode of treatment, or medicine, is a too sanguine description of its supposed powers, the representation of which is sometimes found not to be supported by experience. The consequence of this is, that, if upon trial it does not uphold the exact character for which it has been attempted to be established, it not only falls into disrepute, but may not even be allowed the credit it fairly possesses, whereas, had correct statements been made of its defects as well as of its merits, future investigation would ascertain how far it could be trusted, and thus remedies, though not general in their application, might, with much advantage and benefit, be retained as adjuvants in the cure of certain diseases.

"Although, therefore, I have found the administration of turpentine in cases of iritis generally, to have been attended with very extensive success, and far beyond what would entitle it to rank as an assistant in its cure, still, as in some cases which were submitted to it, the same satisfactory results did not follow, I think it but right to mention it here in the manner I have done."

CASE OF RUPTURE OF THE HEART FROM FATTY DEGENERATION OF THAT ORGAN.

By R. H. Meade, F.R.C.S., of Bradford, Yorkshire.

The subject of this case was an old gentleman, aged 88, very strong and active, and who had walked to church (a distance of half a mile) and back again, on the morning of the day he died. He went to bed, feeling as well as usual; but on the servant taking leave of him, she noticed an unusual appearance in his countenance, and heard him gasp once as if for breath. She immediately called for help, but he never moved or breathed again.

Post-mortem Examination.—Lungs were quite healthy; the pericardium covered with much fat, and when opened was found distended with blood, separated into serum and clot, to the amount of a pound. This was found to proceed from an irregular jagged opening at the lower and back part of the left ventricle, near the apex of the organ. The muscular texture of the heart around this was so soft and altered in structure that it would not bear

the pressure of the finger. It was of a dirty yellow colour, and at the first view looked like softened tuberculous matter; but on closer inspection was found to consist of a fatty substance. The lower part of the ventricle, in which the rent had taken place, bulged out so as to form a sort of pouch. The heart presented no other important alterations; but it was generally loaded with fat, and the muscular texture was pale and flabby.

The coats of the aorta, as well as the mitral and aortic valves, were partly ossified, but not to a degree to interfere materially with their action. An interesting question, the author observes, in connection with this case, is—how long the disease had existed before the rupture of the heart occurred, and whether it could have been long present without giving rise to symptoms? He states he was in attendance on the patient two months before his death, for some weeks, when he had cough, and complained of weakness, with constant noise in his head and ears. The pulse was full, and had a jerking feel; but he did not detect anything unnatural in the sounds of the heart.—*Dublin Medical Press.*

PHYSIOLOGY.

PRECOCIOUS CHILDREN.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—Dr. S. W. Shepard, near Lawrenceville, N.Y., sends me the following description of two precocious children residing in his vicinity. The cases are those of a boy and girl. Dr. S. says—"The boy is about 4 years and 11 months old. He is three feet and four inches high, and weighs fifty-eight pounds. His head is very large. He has considerable beard, as much as boys generally have at 19. His voice is a heavy bass. His intellect does not seem to be prematurely developed. In this respect he does not differ from other children of his age. His countenance is that of an adult—it has no childish look about it. His testicles and penis are of the usual size of the adult organs; the hair upon the pubes is long but thin. In fact, he appears like an adult dwarf.

"The girl I cannot describe so well, as I never was allowed an examination. She is 3 years and 7 months old, rather large of her age. Her *mammæ* are preternaturally developed. In this respect she has the wonted appearance of a girl of 18." The doctor has been unable as yet to find out whether or not the girl menstruates. He adds, "Their animal desires are fully developed; as a proof of this, they are often seen in the act of coition."

I have only to add, that I know Dr. Shepard to be perfectly reliable, and that his report of these cases agrees with that given me by others. The cases are, I believe, without parallel—all their peculiarities considered. If they are worthy of publication, please give them a place in your widely-circulated Journal.—As ever, yours, &c.

Castleton, Vt., June, 1846. Middleton Goldsmith.

MIDWIFERY.

[We copy, from the *Boston Medical and Surgical Journal* of the 19th inst., the following cases, furnished to it by Dr. Badgley, of this city. Dr. Badgley has not seen fit to make this Journal the medium of his communication to the profession, but that is no reason why we should not enshrine his production in our columns for the benefit of the profession in this country who may not receive our contemporary. At the conclusion of his first reported case, Dr. Badgley, it will be observed, has drawn certain "inferences." The inference which we have irresistibly drawn from perusing them, as well as the premises on which they are based, is simply this, that it was Dr. Badgley's plain duty, as it is that of every medical man, more especially of one occupying the very important position of a lecturer on the Principles and Practice of Medicine in a School of Medicine, to *proscribe* the use of *nostrums* or quack medicines *in toto*, instead of countenancing their employment by *prescribing*, as Dr. Badgley has done, a system of regimen, with collateral measures to be observed during the administration of such remedies, "of the nature of which little is known," and which he had too good grounds for believing "must be ranked among the narcotico acrid poisons." The case which Dr. Badgley has detailed, is an instructive one, at least in one respect—it will serve to convince the community at large of the danger which they encounter, in swallowing, with the avidity for which they are notorious, and in defiance of repeated warnings, quack remedies, or patent medicines, whether in the shape of Life Pills, Pulmonary Balsams, or Cordials, &c.—Eds.]

CASES IN PRIVATE PRACTICE.

By Francis Badgley, M.D., Fellow of the Royal Medical and Chirurgical Society, London, and Lect. on the Principles and Practice of Medicine in the Incorporated School of Medicine and Surgery of Montreal.

(*Communicated for the Boston Med. and Surg. Jour.*)

I. *Case of Apoplexy, with fatal termination, from the injudicious administration of Fahenstock's Vermifuge.*—Miss ———, æt. 9 years and 11 months, a beautiful child, of sanguine temperament, had always enjoyed perfectly good health. From appearances manifested for some days prior to her being subjected to the remedy, it was conceived that she was suffering from worms; she had, during the last summer, taken the same medicine under similar circumstances, with apparently good effect. Two bottles of the vermifuge had been administered in divided portions daily, for four days, she had been kept from animal food, and had taken no other medicines.

On Saturday, the 20th of June, she exhibited something peculiar in her manner, not distinctly comprehending, as it would seem, what was said to her, and mistaking one thing for another; but from the natural liveliness and playfulness of her character, this was not calculated to attract any particular notice.

At 5 o'clock, on the morning of Sunday, the 21st, her mother was aroused by her nurse informing her that Miss ——— was in great pain, screaming from its severity. The pain was complained of in the stomach, and from her having been kept on low diet, while she was taking the vermifuge, some wine was given to her with apparent relief. She almost immediately afterwards, however, fell into a state of stupor, which so much alarmed her parents, that they sent for a physician in the neighbourhood. This gentleman, although not in civil practice, promptly and most kindly attended, and having learnt the history of the case, ordered sinapisms to be applied to the legs, stimulating frictions to the vertebral column, and an enema to be administered. He then took his leave, recommending the parents to send for their ordinary medical attendant, and offered, as his opinion, that the little patient would in all probability, in the course of a few hours, awake from her then lethargic state, as the effects of the remedy would, it was likely, by that time be exhausted. About noon she had so far recovered, apparently, from her state of insensibility, that she recognized her mother and father, embraced them, and even masticated a morsel of bread that had been put into her mouth. She soon relapsed into the same comatose state in which she had been in the morning. I was sent for at half-past 1 P.M. On entering her room, I found her in bed in a state of complete coma; no stertorous breathing, but occasionally a deep sigh; the pupils movements of the fingers; skin natural; no heat of head; features calm; face pale; occasional borborygmus; bowels confined; pulse 120, weak and fluctuating. I ordered fresh sinapisms to the feet and legs, and a long one from the nape of the neck to the last dorsal vertebra; hot fomentations to

much dilated, with now and then very slight convulsive the chest and over the epigastrium, and bottles of hot water between her knees; burnt brandy was administered every ten minutes by the mouth, and an enema of castor oil and spt. turpentine was thrown into the intestines.

Feeling fully sensible of the perilous position of my little patient, I requested a consultation. Dr. Crawford met me. In addition to the counter-irritation already made, a mustard poultice was applied to the epigastrium, and a mixture of spts. æther sulph. and spts. ammon. aromat. given internally, alternately with the brandy. The enema was repeated.

She continued in much the same state until about 8 P.M., when feeling a slight sensation of heat in the head, the pupils apparently disposed in the least degree to contract, the bowels having once been moved and urine passed, I was led to fancy that re-action might set in, and as her residence was at some distance from the city, wishing to be prepared I sent off for a dozen leeches, which, from re-action having commenced by the time they were brought, I immediately applied, assisted by Dr. Crawford, to the temples. The blood abstracted by the leeches and subsequent hot fomentations, was considerable in quantity; pounded ice was now applied to the top of the head, a blister to the nape of the neck, five drops of croton oil diffused over the tongue and fauces, and another enema, the same as before, but containing several drops of croton oil, thrown up into the intestines. The convulsive movements noticed in the fingers, during the early part of the day, had become increased in force, attacking the muscles of the face, neck, back, and extremities, and at about 4 P.M. were so severe, that ice cold water was poured upon the head from a height of about four feet, but without any benefit. After the leeching, they became less frequent in their paroxysms, and were most strikingly noticed in the muscles of the neck and back. The only result of the latter part of the treatment in this case, was the return of the features, which, with the setting in of re-reaction, had become puffed and purple, to a perfectly natural hue, and the breaking out over the surface of a general perspiration.

Miss ——— died at 4 A.M., on Monday, the 22d of June. No *post-mortem* examination could be obtained.

The inferences deducible from the above are, in my opinion, the following:—

1. That this preparation, of the nature of which so little is known, must be ranked among the class of narcotico-acrid poisons, producing its effect primarily upon the stomach and small intestines, and secondarily through the ganglionic system upon the entire cerebro-spinal axis.

2. That its effects from accumulation must be guarded against in the same manner as those of digitalis, &c.

3. That oleaginous purgatives should be combined with it, and that the absorbent system should not be excited by a system of low diet being enforced during the time of its administration.

4. That the manner in which death occurred in this case, was clearly that, which would be referable to Bichat's "death commencing at the head."

II. *Case of Pregnancy, unaccompanied by any of the ordinary signs of this state, in a woman already the mother of three children.*—Mrs. Franklin, æt. 25, of middle stature, a nervous temperament, the mother of three children, had always enjoyed good health prior to her marriage, five years ago. Had had natural labours with all her children. On the occasion of her last confinement, the midwife who attended her was under the necessity of removing the placenta in consequence of adhesions. For some time after this labour, she suffered a good deal from pains in the thighs and legs, and remarked that the lochial discharge was not so abundant as on previous occasions. Her youngest child is now (the 21st May) nearly ten months old, and has been weaned nearly six weeks.

Just about the time of weaning her child, she was seized with a bloody discharge from the vagina, which continued for two days and nights, then ceased; at the expiration of a week it returned, lasting for the same length of time. These discharges have returned with regularity ever since at similar intervals, and lasted the same period. When called in to see her, I found her in a pool of blood which had issued from the uterus. I prescribed for her two scruple doses of the diacetate of lead with a little vinegar. There was a tumor of a fig shape, flattened in front, extending from the symphysis of the pubis to the middle space between the navel and the ensiform cartilage. The hand could be easily passed behind the cornua of the tumor and its base. Had had none of the usual signs of pregnancy; the mamillæ were particularly flaccid; the areolæ pale and without the appearance of surrounding papillæ or congested cutaneous veins. No placental bruit could be heard either immediately or mediately. The os tincæ was natural, as a matter of course retracted upwards and backwards. Had taken acid medicines and castor oil. A dose of the latter she had taken in the morning.

22d.—Had some discharge during the night, but much less than usual; has more the appearance of menstrual and other blood mixed, than ordinary blood. Complains of weakness; pain at the top of the head. The bowels have not been affected by the castor oil taken yesterday. I ordered an enema to be administered. At my second visit, found the midwife, who had been sent for to carry out my instructions, and who expressed to me her conviction that there had been a miscarriage some weeks since; that she had at that time been sent for, and was perfectly satisfied that such was the case. She (the midwife) was a person of great experience, and practice, and, moreover, a sensible woman. Therefore, I admit, that I was influenced by her report. I plugged the vagina with pounded ice, and applied cold cloths to the vulva and a general bandage.

There was much less discharge on the next day, pain in the back induced only by considerable direct pressure on the tumor, or when the mass is moved from side to side. I conceived either that the tumor was caused by a collection and retention of blood oozing from an abraded surface on the interior of the womb, or that there was a quantity of menstrual blood which could only partially escape through the cervix and os uteri. The bandage round the pelvis was adopted, and a mixture of the supersulphate of magnesia in infusion of quassia was ordered.

From this state, the tumor gradually diminished, although with continued moderate discharge until the 28th, when I suggested to her husband the propriety, in the early part of the ensuing week, of taking her to the country. The very next day he took her by steamboat to a small watering place a few leagues from the river, with her two children. She took off, before starting, and left behind her, her bandage. She was a good deal fatigued with attending to her children, and the journey. She felt the tumor increase suddenly, had another discharge of blood, and returned forthwith to town. I did not, however, see her again until the afternoon of the 8th June, when she called at my house, distant from her own residence nearly a mile. She had all the appearance of a woman in the seventh month of pregnancy. I sent her home, and called upon her the next day. Found her in bed, made a minute examination, and requested a consultation. Drs. Arnoldi and Crawford (the former my colleague, and Professor of Obstetrics in the School of Medicine) met me at 3 P.M. Dr. Crawford and myself were of opinion that the tumor was attributable to retained blood. Dr. Arnoldi thought that he could distinguish a solid body in the cavity of the womb. The stethoscope was again used by us all, with the same results as when I employed it early in the case. Although there was a slight difference of opinion as to the nature of the tumor, we were perfectly unanimous in our treatment, that ergot should be administered, and should that not suffice to cause contraction of the womb and the expulsion of

its contents, a bougie should then be introduced. I prescribed for her three powders containing ℈ ij. of fresh and very excellent ergot, combined with the same quantity of sub. borat. sodæ. She took them in the course of the next forenoon. Each dose caused nausea and vomiting, but not for a considerable time after if had been swallowed. She did not suffer from the usual pain elicited by the remedy, and passed a tolerably easy night, sleeping a good deal. The next morning, as agreed upon in consultation, I proceeded to introduce a large-sized flexible metallic bougie, but immediately on passing the cervix uteri, a sensation being communicated to my hand, of the extremity of the instrument striking against a solid body, I desisted forcing it on any farther. There was no discharge of blood from this operation. Designing to return the following day with Dr. Arnoldi, and to renew the operation if required, I stated my intention to her husband. He begged of me to allow him to fetch Dr. A. at once. After a good deal of arguing with him, I at length yielded, and waited his return with my friend. I related to him what I had felt; he took the bougie and introduced it to its full length. This operation induced no great pain. We prepared her, however, for them. Ordered for her a dose of castor oil and spt. turpentine, and an anodyne if required. She took the former in the course of the evening, but from having no pains did not require the other. The succeeding day, she complained to me of severe pain in her back and belly, accompanied by a good deal of forcing. In the course of the day, she passed clots of blood to the extent of nearly two quarts. The pains became aggravated towards night. Saw her again at 8 P.M. Had passed more clots; was in violent pain, like that of labour. I gave her the anodyne draught.

I had scarcely reached my own house, when another messenger came to me, stating that my patient was bleeding to death, and that my attendance was urgently required. I met on the way, and took up with me, my friend Dr. Arnoldi; armed with sugar of lead, ergot and opium, we entered the room. We found the woman lying on her back, pale, but perfectly composed and calm. A woman on the bed beside her, accosted us by expressing the fright which she had herself had, "for the *child was born.*" The poor woman's fear had not been greater than was *our* surprise, inwardly felt and talismanically communicated to each other. The child was born, but the placenta was not yet detached. The removal of this occupied only a few minutes. The fœtus was a male of about eighteen weeks. From its external appearance it had been dead several days. The patient had slight after-pains, but went on perfectly well up to the time when my attendance ceased.

Is the above case to be looked upon as a case of partial placenta prævia? Or is it to be attributed to an oozing and gradual deposition, with coagulation of blood between the inner surface of the uterus and a portion more or less considerable of the decidua reflexa? One valuable lesson is to be learned from it, at all events—never to offer in positive terms a diagnosis, where there is any complication.

Montreal, July 14, 1846.

SURGERY.

CLINICAL LECTURE,

By Cæsar Hawkins, Esq., Surgeon to St. George's Hospital.

1. *Fibrous tumour of the upper jaw—Epulis.*
2. *Fibrous tumour of the palate.*
3. *Case of warts, nevi, and serous cysts.*

I have placed before you, gentlemen, to-day, the preparations from two cases which you saw operated on on Thursday last; one of them is a fibrous tumour of the palate, removed by Mr. Keate; the other is a fibrous tumour of the upper jaw, which I removed myself; the latter is called an epulis, as being like the gum, and partly growing from it, and I propose to make this disease the subject of our first consideration; looking upon it, however, as essentially the same as Mr. Keate's tumour of the palate, and not as a disease, strictly speaking, of the gum alone, as you might understand from its name. I will read you the history of the first case:—

I. Mary Tyrrell, ætat. 30, was admitted, under my care, on the 8th of this month, with a tumour, about the size of a large walnut, or rather larger, of an irregular form, growing from the alveolar process of the right side of the upper jaw, and attached, to all appearance, by a broad base, to that process, in a space intervening from just behind the canine tooth, as far back as the last molar. The tumour is vascular, and at times painful; a portion of it projects internally from the attachment of the alveolar process, and lies (as ascertained by the probe) in contact with the mucous membrane of the hard palate, but is not attached to it, whilst a smaller portion, also unattached, turns upwards over the middle of the external surface of the maxillary bone. The surface of the tumor below this portion is vascular and ulcerated, and projects downwards, and lodges, when the mouth is closed, upon the dorsum and side of the tongue. Although the jaws can be closed, the tumor very much impedes mastication and deglutition; it never bleeds, and is painful only at times. Her health seems to be good.

She has been subject to toothache on that side for the last two years, and at the beginning the pain was very severe; when the tooth had perfectly loosened from its cavity in the socket, a small lump appeared, about the size of a pin's head, on the outer side of the gum, in the situation of the second bicuspid or first molar tooth; she picked it off, but in one or two months it appeared again in the same place, and has been since growing to its present size; she had one bicuspid and a molar tooth removed by a surgeon about three months ago, which were sound and not loose, according to her account, and a decayed stump was also extracted a day or two after her admission. The tumor has much increased in size lately.

It is said by some surgeons that epulis is more common in the lower jaw, but there are before us several specimens of the disease from either jaw, and I have myself seen and operated, I think, on nearly an equal number in the upper and lower jaws; so that I do not know that it is more frequent in one than in the other.

It is said, also, that this tumor is generally seen in children or young persons; I have myself seen it several times in children, but the majority have been adults like our present patient, and like several of those from whom the tumors on the table were removed—30, 40, or more years of age; it is probable, therefore, that there is nearly an equal number of young persons and of adults subject to its formation.

If you examine the tumor on the table, you will perceive that it is solid and firm, and distinctly fibrous, both to the naked eye and under the microscope, the fibres in the centre being evidently nearly perpendicular to the surface of the socket from which it derived its origin; the fibrous structure is most dense in the centre, and becomes softer and mixed with more granular structure towards the circumference, where it is covered, by the mucous membrane of the gum, which is in some parts warty and very irregular. When you remove such a tumor, you may find the surface of the bone from which it grows scabrous and irregular, or with spiculæ projecting into the base of the tumor, the bone itself being hard and dense, so that you find it useless to endeavour, with a sharp chisel (as I tried in vain in my patient,) to shave off the outer surface of the bone. In the other tumor removed by Mr. Keate some spiculæ of bone projected into it from the bony palate; its fibrous tissue is, however, rather less dense than in the one from the alveolar process, and the mucous membrane of the palate seems quite free from attachment to it, instead of being a part of the tumor, as in the epulis.

Sometimes, as you would expect in a tumor essentially connected with the bone or periosteum, you have spiculæ of bone in the centre of the tumor, separate from the surface of the bone. Here, for example, is one attached only by a pedicle to the gum, in the centre of which is an osseous nucleus. The natural course of change of all fibrous tissues in their transformation, is to have a deposite of bone, as you may see in fibrous tumors of the uterus, or other parts; *a fortiori* you might expect that fibrous growths of the periosteum or bone would have a tendency to some ossific deposit. I regard what is called epulis, as a fibrous tumor of the bone, generally of the surface of the bone, which presents much of the appearance of the gum, because it grows into the gum

and all tumors are inclined to resemble in their structure the tissues in which they form; there is a little difference, therefore, between these two fibrous tumors of the gum and palate, and between them and fibrous tumors of the cellular tissue or uterus, or glands, or skin. Look, again, at this preparation of fibrous tumor of the upper jaw, which was removed by Sir Benjamin Brodie, which has affected all the thickness of the bone; the outer part was to all appearance a tumor like that of our patient—an epulis; the centre is almost solid bone; and the interior, where it projects into the cavity of the antrum, resembles a mucous polypus, because the mucous membrane is changed on the inside, as the gum is altered on the outside, during the growth of the tumor; the disease having commenced, according to the evidence of pain in the centre of the bone, some months before it projected externally. And another confirmation of this opinion of the origin of epulis from the periosteum and bone is given by what you say in this very case of Tyrrell's, namely, that the tumor occupies the whole cavity of the alveolus, where there is no gum, and is quite fibrous in the centre; the circumference alone having the appearance of gum, where it approximates to that texture.

You may have remembered, what our notes specify, that the tumor was vascular; it was of a red colour like the gum, which is well seen in this drawing, which I had taken from the patient from whom I removed this round tumour with central bone; and you can press out the blood, and see it return again slowly as in the natural structure of the gum. Yet, although well supplied with blood, it often grows very slowly. I had this cast taken from a woman, 30 years of age, who was under Mr. Keate's care in the hospital, with a tumor of the lower jaw, which began as long as eighteen years previously, and it was removed five years afterwards, without having grown larger than a pea; it was removed again eight years after this, by a second operation, when as large as half a walnut; and in five years more had attained no greater a size than you now see; in the third operation a portion of bone was removed by Mr. Keate. In our patient the tumor became larger than in this case, in less than two years, and was rather unusually rapid, but still was little ulcerated or altered. As it proceeds, the tumor grows more rapidly, and is softer and more vascular, and ulcerates, and has irregularities from the pressure of the teeth; and the ulcers are liable occasionally to become sore and painful, and to bleed slightly, and form a fungous growth, something like that of a malignant tumor, and they are sometimes described as being carcinomatous.

I do not believe, however, that there is any reason to think that fibrous tumors, either of this or any tissue, have a carcinomatous nature; or that, even when they ulcerate extensively, and may be fatal from irritation, they have the power of contaminating the adjacent tissues, or of affecting the general system by absorption. In this drawing of a very large fibrous tumour of the uterus, or polypus as it is termed, you may see great vessels and cells in its interior, and the irritation of it destroyed the patient, but no part showed evidence of malignant growth.

This fibrous tumor has cells within it of some size, and the outer portion of an epulis, when growing quickly, may have a few cells developed, although in our patient there is only a little greater softness of the outer parts of the tumor. When not condensed, a fibrous tumor may have very large cysts, as in a case where I tapped a woman with what appeared like ovarian tumor, and removed fifteen pints of fluid, which proved on examination, to be secreted in a cyst of a large fibrous tumor of the uterus, which had several other cysts of a smaller size within it. In fibrous tumors of the interior of a bone, also, very great cysts are sometimes developed; but in the epulis even small ones are not common.

Our patient informs us that she suffered much from toothache before the tumor showed itself; and it seems probable that the irritation of unsound teeth may sometimes occasion the growth, as any source of irritation may do in other textures; but it does not appear that this is often the case, for it grows sometimes from the outside of the alveolus, away from the teeth, and pushes them aside, while they continue perfectly sound; and therefore the pain attributed to the teeth, and often leading unnecessarily to their removal with the view of curing the toothache, is really in many instances owing to the growth of the tumor, and not the tumor to the irritation of the teeth.

Like almost all solid adventitious structures, an epulis is not much influenced by any remedies you can employ, and as it occasions considerable inconvenience and deformity, as you have witnessed in Tyrrell, and as there is danger of its affecting more and more of the bone to which it is attached, and may in time become unhealthy and ulcerated, its removal should be recommended at an early period. The steps necessary in the operation depend on the size and situation of the tumor, and its connexion with the parts around; but do not forget always to direct your attention to the bone itself as the source of the disease.

1. Suppose that the tumour affects one lamina only of the alveolus, either the outer or inner, with the socket perfect, and the teeth sound, and the base a narrow one; it may be sufficient to cut off the tumor down to the gum, and with a sharp chisel to shave off any little spiculæ of bone which are prominent, and watch very carefully for any sign of unhealthiness in the granulations, and if there be any a day or two afterwards, to touch the surface of the bone from which they spring with nitric acid, or some other caustic, of which I will presently speak.

2. If the inner surface of one lamina is affected as well as the outer, so that the tumor pushes the teeth aside, or passes between them, so that the surface of the bone cannot be got at, the tooth or teeth must first be removed in order that the same proceeding may be successfully carried into affect. For example, this drawing and the corresponding preparation are from a patient of mine, a woman 40 years of age, in whom a tumor appeared between the left upper canine and bicuspid teeth, attached by a narrow pedicle just within the socket, ulcerated on the surface, and the gum a little diseased on each side of the root; it had begun two years and a half before, and nine months afterwards, when half its present size, it had been cut off, but grew again. I extracted the two teeth, which were separated, and excised the tumor and as much gum as was altered in appearence, and shaved off some of the outer plate with a chisel; once or twice afterwards the surface was touched with nitric acid, and I believe the disease was cured.

3. If both lamiæ of the alveolar process are implicated, so that the tumor rises from the bottom of the socket, caustic will not easily reach it so as to effect a permanent cure, though it may do so if freely applied; as, however, tedious exfoliation of perhaps more than is intended will occasionally follow the free use of caustic, a quicker and more certain cure is produced when there is a narrow but deep attachment in the socket, by removing a V shaped piece of the socket by means of a small key-hole saw placed on each side of the diseased piece of bone, the two incisions meeting at an angle as deep as appears advisable, and a pair of forceps will break off the portion when almost insulated. The remaining bone, when thus sawn, is too well supplied with blood to exfoliate, and it readily granulates so as to fill up in great measure the place of the bone which is lost.

4. If there is a still deeper disease of the bone between its lamellæ, so that several of the teeth are loosened or displaced, and a swelling of the bone itself, or of one or both its coverings, indicates the formation of the tumor within the cancelli, it becomes necessary to remove a considerable piece, as in some of the preparations on the table, in order that no disease may be left behind. In the lower jaw, the whole thickness of the bone sometimes requires to be removed by two perpendicular cuts of the saw, which may be made to half divide the bone, and then strong bone-cutters will break through the remainder, more or less being first cut by the saw, according to the age of the patient and the hardness of the bone; and it is quite surprising how little deformity is created by the removal of a portion of the whole substance of the lower jaw. In order that the saw may be conveniently applied, appropriate incisions must be made in the soft parts; if the disease is situated in the chin, it may happen that the thickness of the bone is not too great, if the lower lip is lax and extensile, for the bone to be sawn and cut, and then dissected out, without any incision at all in the lip: and the same may be done in the centre of the upper jaw; but in most cases a semilunar incision is to be made below the chin, and the lip dissected up, for the saw to be applied through the opening, by which means the subsequent cicatric is concealed by the dress to a certain extent. If the disease is at the side of the lower jaw, a curved incision is to be made along the basis, and the flap raised for the admission of the saw and cutting forceps, without interfering with the circle of the mouth, and the scar is much hidden by the cravat or the cap-string. In every case the teeth should previously be extracted, as the saw will be impeded by any fragment of the dental substance.

5. In fact, however, the simple fibrous tumor, when situated in the lower jaw, need very seldom be removed with the bone down to the base of the jaw, especially in adults, as the new growth extends deeply in the cancelli less frequently in them than in children. A girl, 15 years of age, was admitted under my care into

the hospital, with a spongy and ulcerated tumor of the right side of the lower jaw, extending from the canine to the last molar teeth, about three quarters of an inch broad, with indentations of the upper teeth upon it, looking as if all the molar teeth were buried in the tumor, but which, by her account, have never appeared. The swelling could be felt on each side of the jaw, as if reaching very near the basis, and it began about seven months before, having given her no pain. I removed it in the way that I have mentioned down to the basis as it did not appear, on consultation, safe to remove less, and the semilunar incision of the soft parts healed by the first intention, the loss of bone being scarcely perceptible. Yet if you examine the preparation, you will perceive that the fibrous growth did not extend much below the bottom of the alveolus, and I might, in fact, have left the outline of the base of the jaw untouched. Generally the depth of the alveoli, or very little more, is all that is actually diseased, so that the removal of half an inch or three quarters of an inch in depth from the top of the socket is enough: but, at the same time, so little inconvenience is experienced by the loss of the whole thickness, that you should not hesitate to do so rather than incur any risk of a portion of disease being left behind.

The mode of operating in such cases as these is this: a perpendicular cut is to be made in the jaw on each side of the diseased growth to the full depth of the part which you intend to remove; then you make a horizontal groove in the bone by means of Hey's saw in a line at right angles with the former cuts, and then you can cut off the insulated portion of bone by cutting forceps without the risk of the bone breaking horizontally beyond the proper distance, the depth to which your horizontal cut extends being greater in proportion to the hardness of the bone. The cutting forceps often exhibited in the shops consist, like this, of two equal semicircles, with straight handles, like pincers, when, of course, it is impossible to get the branch within to the right place opposite the outer one; nor does the turning of the handles get them sufficiently out of the way of the teeth of the upper jaw; you can effect this object, however, by the inner branch being twice as long as the outer, by which means its inner extremity curves around the jaw to the proper depth within the mouth. Sometimes a cutting forceps, the branches moving like those of a pair of scissors, but somewhat curved, will answer your purpose, the bone, in either case, breaking up if the groove is made to admit one end of the forceps. A more effective instrument is this which I show you, recently made by Savigny, where two sharp cutting blades are placed opposite one another, one within and the other without the portion of bone to be removed, and then a handle turns a screw, which quickly forces the outer blade onwards in the groove made horizontally in the bone, and cuts it off with much power, and without any straining or irregular action of the hands, as in the use of the common cutting forceps; it is a very useful instrument in most cases of this kind, and removes the bone easily.

6. For the epulis of the upper jaw similar proceedings may be adopted, according to the size of the part to be removed, and incisions must be made according to the situation of the tumor; in the centre the lip can be raised without any external incision; at the side the cheek may be opened horizontally, or a flap insulated and turned upwards to expose the necessary extent of the bone. It is very seldom necessary, however, any more than in the lower jaw, to excise more than the depth of the alveolus, or a little more, by a V cut, or by the two perpindicular cuts of the saw, and the separation of the diseased part horizontally by the screw-cutting forceps, which I have shown you. Here is a preparation of the upper jaw, which was removed; yet even here, although the tumor half fills the antrum, you can perceive that the orbitor plate might probably have been safely left.

Now let us apply these remarks to our patient, and see the reason of what I did in her case. It was obvious that the whole breadth and depth of the alveolus was implicated in the base of the tumor, since it overlapped both the palate and the outside of the jaw; but as there was no bulging of the bone above, it was not likely that more than the depth of the alveolus was affected. So much, then, must have been excised, to secure the patient against a return of the disease, but to make the necessary perpendicular and horizontal sections of the bone, an incision must have been made in the cheek, as the disease was too far within the mouth to be otherwise accessible. But then it was possible, by cutting off as much of the basis as could be reached, and subsequently applying caustic, that the origin of the tumor from the surface of the whole depth of the socket might be destroyed; and if only the surface of the bone was affected, that the disease might never return. As, then, this plan was not unlikely, though not certain, to effect a permanent cure, and as when the disease, when it returns after being not perfectly removed, is often very slow in its progress, as I have already shown you, and as the nature of this fibrous growth is innocent, and not likely to be excited into rapid progress, as a carcinomatous growth is sure to be, by being meddled with without complete removal, I gave the patient her choice of what she would have done; and she decided, as I should myself have chosen, I think, to run the chance of the disease returning, and then having the more sure method of operation practised.

In the operation, then, I insinuated the flat surface of the knife between the palatine projection of the tumor and the palate, and afterwards between the outer overhanging portion of the surface of the jaw, down to the root of the tumor, which occupied the whole breadth of the alveolus from one end of the tumor to the other, completely filling the cavity. The base being thus cut off to the level of the socket, I next removed a stump of another tooth, which was now exposed in the root of the tumor, and endeavoured with a chisel to shave off the surface of the alveolus, but, as is generally the case, the bone was too hard for this object, and I therefore left it for the application of caustic the next day: and as a vessel of some size came out of the bone at the root of the tumor, and bled a good deal, I placed on it a piece of blue lint, and covered this with a pad of lint, which was kept pressed firmly by the teeth of the lower jaw.

The next day I conveyed some strong nitric acid, by means of a pointed piece of wood with a little linen tied on it, to the base of the tumor within the socket, till it bled too much for more to be applied on that day.

I used the nitric acid, but I do not know that it materially signifies which caustic you employ; but in such situation as this, within the mouth, you can more easily regulate the acid, as it does not spread beyond where you apply it, and even this effect you can directly stop by a little chalk rubbed on it. Potassa fusa, on the other hand, is very deliquescent, and is carried by the blood about the neighbouring parts, so as to injure them, even in spite of vinegar, which you should always have at hand to neutralize the alkali by means of a little sponge or lint on a forceps or stick. The actual cautery would also do for a superficial part, but not for the hollow of the socket, and I doubt whether the nitric acid would easily have acted on the bottom of this cavity. I should therefore probably have applied a little chloride of zinc on a piece of lint, and forced it in by a compress of lint, just as I checked the hæmorrhage by pressure, putting some soda or lime on the lint, to prevent the deliquescent salt from doing any harm. I found, however, when I next went into the ward, that the patient had gone home, impatient to return to her children, and perhaps rather frightened at the idea of the caustic being repeated, now that she has, as she thinks, got rid of the tumor. It is probable, therefore, that the disease will return, for which she will have herself only to blame, as she has been informed of the chance she has incurred.

II. The next case for your notice is a complicated one, which is headed nævi, warts, and aqueo-cystic tumor of the forearm; which you have seen in a young woman, Frances Connor, 17 years of age, who was admitted on the 8th of April, with this account, which I will read:—

She has a tumor, about the size of a large orange, at the upper part of the front of the left forearm, of a firm and solid texture externally; but presenting a very decided feeling of fluctuation internally. Above the tumor also is a small detached portion, circumscribed, of the size of a large nut, with a perceptible feeling of fluctuation on pressing it. It was, in fact, rather too tense actually to fluctuate, though the existence of fluid was probable. This tumor is subcutaneous, as proved by the motions of the muscles of the forearm being perfect, but the motions of the elbow-joint cannot be perfectly performed, as the tumor in front presents complete flexion. The skin covering the tumor is of a darker colour than that of the sound skin, and is covered with a few small warty tumors; the veins are distinctly seen passing beneath the skin over the upper margin of the tumor, but are not seen below this part. This tumor is slightly painful on pressure, and pains her much on using the arm.

At the lower part and front aspect of the forearm, and separated from the upper tumor by a distinct interval of an inch in extent, is felt an elastic mass of soft substance of several inches in breadth and length, and nearly an inch in thickness, and having

the same degree of solidity as in parts of the upper tumor, but not so painful. This also is subcutaneous, and the skin over it is covered in a much greater degree than the other tumor with a number of dark-brown warty excrescences, and spots of cutaneous nævi, of simple varicose vessels for the most part, the cuticle of which is very thin, so that they bleed from time to time spontaneously. The skin covering this soft tumor is of the same peculiar dark colour as the skin over the upper tumor, from the vessels in its substance and below it.

The whole of this is congenital, but the upper tumor was originally of the same thickness and feeling as the lower part; the lower tumor has remained stationary, while the upper has undergone a change.

This patient was at first admitted as an out-patient of one of my colleagues, nine months ago, for an attack of inflammation and much pain in the upper tumor, (which was supposed to be fat). This inflammation caused an increase of its size, but was relieved, and a fresh attack came on in March last, which has left it in the state described; the tumor has been blistered and leeched, and the tincture of iodine and cold lotion were applied before her admission under my care.

Now, first, with regard to the warts present in this case; you saw that they presented the usual appearance of this growth of the papillæ, and that they were subject to the effects of inflammation of the skin, so that after I had induced inflammation by rubbing the cyst, they increased considerably in size, and were painful, and were disposed to secrete pus between their folds, and again that they lessened in size when the inflammation ceased. They gave no trouble, however, commonly, and to our patient their appearance on the arm was of no importance, and I did not think it worth while to do any thing farther, particularly as the caustics necessary to destroy so large a surface would perhaps have induced ulceration of an unhealthy character in the nævi below them, and when once begun in this structure ulceration sometimes spreads for a considerable distance; I have known the life nearly destroyed by an ulcerated nævus reaching as this does from the wrist to the elbow.

Next as to the blood-vessel disease, the existence of which was obvious from the colour of the subcutaneous structure visible through the half transparent cutis, which was itself also somewhat diseased, numerous varicose vessels being seen in points on the surface, their size varying from excitement or inflammation, and the increase of size from these causes ceasing, as soon as the inflammation terminated; you might have seen the points opened by abrasion, and you could squeeze out a portion of coagulum from the orifices again and again, as the vessels filled with blood; and this structure was evident both in the upper and lower swellings, and closely resembled the external appearance of a large nævi in this cast and drawing, in which the varicose points bled more than in this girl.

Now it did not appear to me that I was called upon to treat the disease of the blood-vessels in this case, which seemed much too extensive to be lightly meddled with, extending as it did over more than half the circumference of the forearm, and reaching nearly from the wrist to the elbow. It was a congenital affection which the patient had now had for 17 years, and in that time it had not undergone any perceptible increase disproportioned to the increased size of the limb; the tumors gave her no inconvenience, as far as this structure was concerned, except where the vessels came in points to the surface, but a drop or two of blood from them occasionally was of no consequence, and the little abrasions could be easily healed with a slight touch of lunar caustic, a piece of which I desired her to have in her possession when she left us, for herself to apply to them.

But the upper part had for nine months undergone some change, which had made it become painful, and prevented her using the arm freely in consequence of this pain, and the increase of size it had attained during that time. Let me, then, next make a few remarks to you on the structure of nævi, in order better to make you understand this alteration of the upper tumor, without my entering, however, in detail into the subject, and without any notice of their treatment.

First, then, you may have observed what are called nævi flammei; marks of various extent of the surface only of the skin, in which it is obvious that numerous superficial blood-vessels, chiefly capillaries, are enlarged and tortuous, and anastomose freely with each other; the disease being generally stationary even when covering the greater part of a limb, or nearly the entire surface of the body; varying in colour, however, so as to be bright red a purple, according to the condition of the blood, or the state of the circulation. Sometimes you see a single point only of arterial blood somewhat prominent, with vessels ramifying unaltered in structure around it, constituting nævi aranei; at other times, as in our patient, points of varicose veins only come to the surface, and sometimes in great number if there is also anything below the skin of the same kind.

Secondly, and more commonly, you meet with cutaneous or subcutaneous nævi, or a mixture of both, constituting distinct tumors of greater or less thickness, varying in colour as arterial or venous blood predominates, if the skin is affected, and generally purple or dark, when situated chiefly below the skin as in this patient. These nævi obviously consist in general of tortuous and varicose and dilated capillaries, embedded in a rather tough cellular tissue, and you can empty them, or allow them to fill at pleasure, by varying the pressure upon them; the coats of the vessels being perceptibly diseased, so that hæmorrhage from them is dangerous, while the vessels going to them and coming from them are in their natural state. Sometimes the veins coming from such a congeries of diseased capillary vessels are also varicose and dilated, so that you can feel them below the skin, just as in a case of varicocele; at other times one or more of the arteries going to them are diseased also, enlarged and softened to a little distance, pulsating visibly or sensibly, or communicating also a pulsation to the whole tumor; such an addition rendering them what John Bell has denominated aneurism by anastomosis.

But, in the third place, this surgeon has asserted that tumors of the blood-vessels of this kind have within them numerous cells, with which the blood-vessels have free communication, as in the natural structure of the gills of the Turkey cock, or the corpus cavernosum; and this description has been followed by Wardrop and other authors: and Dupuytren, following the same idea, has given the name of erectile tissue to these new formations, from their resemblance to the natural erectile tissues of the body.

The structure of nævi, whether pulsating or not, has been, however, a disputed question. Certainly I think, there is in general no such formation of cells, but the tumor consists solely of dilated capillary and other vessels. Even in a remarkable case, which occurred in the London Hospital, and has been described by Mr. Curling, where large external tumors communicated with great masses of similar character in the chest and abdomen, the disease examined on this great scale consisted only of blood-vessels of various sizes in cellular tissue.

But, in some few instances, there is an appearance of irregular cavities, which are probably dilated veins, communicating with the course of the undilated veins, as they contain coagula, and which have only the appearance of cells, when cut across, in the same manner as the tortuous vessel, folded in the vesiculæ seminales, gives the form of cells to those bodies.

It is very seldom that an opportunity is afforded of examining a large blood-vessel tumor; I had the power of doing so in the case of which this cast gives a likeness, in which you see that the tumor was of several inches in diameter, and not less than two inches in thickness; it was congenital, but had much increased for some time before the patient, a boy of seven years of age, came under my care, and numerous vessels, which bled a good deal from time to time, had lately appeared in the cutis. I removed it by ligature, and in the section of the tumor on the table, and in the drawing also, you may see in addition to the usual vessels that several apparent cells exist. Now some of these cells were filled with coagulum; their structure appeared identical with the other veins, of which they constituted as it were aneurismal pouches. So that in this respect they resembled what has been described and figured by Bell and Wardrop.

There were, however, besides these, some other cysts, which contained only serous fluid, and which were to all appearance close shut sacs,—serous cysts; their size being about that of peas, one or two somewhat larger than this, and others smaller. Now all tumors may form cysts, particularly when they grow without pressure, as into a cavity; I have mentioned already even the fibrous tumor, dense as it is, having cysts, and even dilating so as to contain fifteen pints of fluid. In cellular tissue serous cysts often form; occasionally many in close proximity, forming a half solid cystic tumor. Such, then, had formed in the nævi of our patient, and dilated to a great size.

The existence of cysts in this case necessarily complicated the diagnosis in some measure, and you observe that the notes say the tumor had been supposed to be formed of fat, to which the elastic cellular tissue and vessels of a subcutaneous nævus bear certain

ly some resemblance; and probably at the commencement the quantity of fluid in the cysts was smaller than on the patient's admission, giving an elastic feeling to the cyst when half full, or an appearance of solidity if tense, instead of a sense of fluctuation. I remember a patient of Mr. Babington's, in whom there was similar obscurity, and on dissecting out the tumor, a small encysted tumor, of the size of a large nut, was found entirely surrounded by a thin layer of the structure of nævus.

The appearance of fluid, however, was quite distinct on her admission; but from the inflammatory attacks, which she was said to have had for some months, I was not quite certain that it might not be purulent; for a chronic abscess in a new growth, such as a nævus, might easily be without redness or other sign of matter. I believed it was a cyst, however, and on the 18th, when I had learned her previous history, I punctured the upper tumor with a grooved needle internally where the sense of fluctuation was greatest, and about half an ounce of straw-colored transparent fluid came away; and on the 15th it is stated that two small tumors had begun more apparent above the elbow by the lessened size of the chief cyst, and seemed also to be cysts. On the 17th I punctured the same cyst again, and let out six drachms of the same fluid, and I now rubbed the cyst a good deal in order to inflame it. On the 20th I again punctured it, as it was refilling, and rubbed it still more, as well as the small one above, which contained the same fluid as the other. The effect of this was, as the notes say, to make the tumor hot and red, and sore and painful; and the warts increased in size, and many spots of the vessels of the nævus were now seen on the surface of the skin like those of the lower part of the arm, and even these latter vessels became larger; but notwithstanding this, the fluid reformed in each of the cysts. I now therefore altered the plan in some measure, and on the 4th of May I again punctured the cysts with a needle, and rubbed them a good deal, and then I applied a compress over the tumor to bring the sides of the cysts in contact, and kept them so by a splint along the front of the arm, secured by stripes of plaster and a bandage.

This treatment has apparently succeeded in perfectly obliterating or curing the cysts; no inflammation now remains in them; the various vessels of the cutis and the warts have returned to their former size; there is no pain or inconvenience in using the arm, or handling the tumor, which is quite soft and elastic like the lower part of the arm, except at one spot, which may possibly be a minute cyst at the lower end of it, deeply situated; but as I punctured it without seeing any liquid, it may only be a little condensation of the cellular tissue in that part of the nævus, such as is often felt in such structures. I have directed her to come again in a fortnight to show herself, after she has returned to her employment, which she has not been able to follow for above nine months.

The cysts appear to be obliterated, as I have said, but it may be, perhaps, that there is only a new action excited in the sac, by which the tendency to secrete fluid is destroyed; just as it is with regard to hydrocele, in which it does not appear necessary to produce adhesion of the sides by means of organized lymph, though the membrane is not refilled after injection; at any rate, bring the sides of a serous cyst in contact, and even without inflammation the disease is sometimes cured, as I have seen in a cyst of the liver containing not less than three pints of liquid: still more may you expect a cure if inflammation be previously excited, as in our patient was done by friction.

Had not this plan succeeded, it was my intention to have made a larger opening into the cysts, and dressed them in with lint, which is another method of curing these serous encysted tumors, for sometimes it is necessary to obliterate them by suppurative inflammation, instead of the adhesive; indeed, an incision or a seton is not unfrequently required; as, for example, with encysted hydrocele of the cord, and what is called hydrocele of the neck, which can very seldom be cured by a less degree of inflammation. I was unwilling, however, in the forearm (indeed, you will seldom be justified in doing so in any part of the body) to resort to an incision till I had first proved that milder remedies would fail, because the inflammation of an abscess of any kind, in connexion with the numerous muscles and tendons of the forearm, is liable to cause much impediment to their freedom of motion; it seemed, moreover, particularly undesirable in this case on account of the connexion of the cysts with the blood-vessel tumor, as unhealthy suppuration and sloughing to some extent would very probably have followed it.

MEDICAL JURISPRUDENCE.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

CASE OF AN INFANT POISONED BY LAUDANUM—APPLICATION OF ELECTRO-GALVANIC SHOCKS—RECOVERY.

BY DR. MARTIN BARRY.

The case was that of an infant nine months old, whose mother had given it laudanum, "to put it to sleep" while she went out. The laudanum was part of a pennyworth bought for this purpose at a neighbouring shop.

The case was first under the care of Mr. Colahan, a pupil at the Edinburgh Maternity Hospital, who, however, was not called in until seven hours after the laudanum had been swallowed; and even then he was kept in ignorance of the fact that the poison had been given two hours later. The infant presented the usual symptoms of poisoning with opium, and emetics of tartarized antimony and ipecacuanha were given. Vomiting was produced and kept up by warm water; but of course, after so long an interval, not with the expectation of bringing back any of the laudanum. The infant at length sank into a state from which it seemed impossible to rouse it, and was then brought to the Maternity. The breathing of the child was very noisy, and the pupils were contracted to almost obliteration. Dr. Barry applied electro-galvanism, using for this purpose the apparatus made by Abraham and Danser, of Manchester. At first the mixture in the trough contained one-thirty-second part of strong sulphuric acid, the quantity of which was afterwards increased to one-sixteenth, and the pointer in the index was gradually brought round to the very strongest power. The wires were applied in turn to every part of the body, and the child was roused by their application, and kept awake, or at least kept moving an arm or a leg, so long as they continued in contact with it. When the wires were removed, even for a few seconds only, it sank sound asleep, the respiration continuing unchanged. At the end of about three hours, a little more susceptible, and perhaps somewhat more energetic in the movement of its limbs, but with this exception, the infant exhibited nothing like a satisfactory revival, until the tremendous current had been made to pass through its body for four hours and three quarters. Then, however, it really did revive, the respiration becoming more quiet, and the pupils undergoing some dilatation. From this time it recovered, required no further treatment, and in a few days was quite well.

In order to arrive at something like an estimate of the quantity of laudanum swallowed, Dr. Barry caused a pennyworth to be bought at the same shop. This was measured, and the quantity, one drachm and a half, compared with what was found remaining of the other pennyworth above referred to, allowance being made for about the same quantity of water said to have been added. Say, therefore, laudanum dr. iss. + water, dr. iss. = dr. iij., of which a teaspoonful is said to have been swallowed. There was found remaining less than two teaspoonfuls, the same spoon being used as that with which the child had been dosed. Thus, a drachm of the mixture had disappeared, half of which was laudanum, or say a few minims less than half a drachm, say twenty-five minims.

Dr. Christison remarked, that if the infant had really taken twenty-five minims, it was very surprising that it had recovered. He recommended Dr. Barry to ascertain whether the laudanum was of the average strength, as from numerous experiments he had made, he had found the quantity of opium to vary greatly in various specimens of the tincture.

The Secretary has since obtained the following additional particulars from Dr. Barry:—The laudanum given to the infant was procured at Anderson's, druggist, No. 147, Canongate. That about half a drachm was the quantity swallowed,

is rendered additionally probable by the fact, that at this shop the quantity always sold as a pennyworth is stated to be a drachm and a half, it being in every instance *measured*. At this shop they keep laudanum of only one quality, and never have two kinds. They have made no addition to their stock of laudanum for four months. A specimen which Dr. Christison had the kindness to examine, procured on the 2d of April, 1846, was taken from that stock, the same which supplied the pennyworth, some of which was swallowed by the infant two months before. Dr. Christison found that it contained a due proportion of opium. Dr. Barry also caused four separate pennyworths of laudanum to be procured at the same shop, at different times, and by different messengers, and in each instance the quantity received was one drachm and a half, or rather more, leaving no doubt of its having been measured. Some of the laudanum thus obtained Dr. Christison has also been so obliging as to examine, and he found it to be quite identical with the other. The woman who held the cup out of which the infant was dosed by its mother, declares that the teaspoon was quite full—that none of the mixture was left on the spoon—and that none of it was rejected by the child.—*Northern Journal of Medicine.*

EXAMINATION OF BLOOD-STAINS.

[We insert the following case from our English cotemporary, as it exhibits in a striking manner the great utility of the microscope in this department of medicine. Within the last few days this instrument has been similarly employed for the first time in this country, by our colleague, Dr. Hall, in the examination of the blood stains found on the clothes of Brady, who was tried for the murder of O'Rourke, the prize-fighter. In this case the blood had been deposited on the clothes about eleven months before the trial took place, and the clothes had every appearance of having been washed, although imperfectly. The chemical examination of the distilled water, filtered through the stains on the clothes, was unsatisfactory, but the microscope revealed the existence of the blood globule, in a most unequivocal manner. A few were noticed in an insulated state, while, in one experiment, a congeries of them was observed in the field of the microscope, having a compressed appearance.—Ed.]

The following evidence in reference to the character of certain marks and stains, from blood, was given in the re-examination of Benjamin Gibbins, who stands charged with the murder of Ann Sloman:—

Mr. Daniel Ross, surgeon, of High Street, Shadwell, who had given evidence before, was recalled by the magistrate. He stated that he first saw the body of the deceased woman about half-past eight o'clock on the morning of the second of June. From its appearance he should say the woman had been dead from four to six hours. He saw the prisoner directly afterwards. He had marks of blood on his jacket. His impression at the time was that the blood on the prisoner's jacket was arterial blood from its bright florid character. The blood on the right sleeve of the jacket appeared to have been squirted upon it.

Mr. Ballantine, (the magistrate.)—Could it have been after the death of the party?

Mr. Ross should say not. He believed the blood was squirted on the prisoner's jacket from a living subject. He had examined the jacket more accurately since the first examination. The result of that examination was that he believed the blood to be arterial, and that it possessed vitality at the time it was squirted on the sleeve. There were splashes of blood on the prisoner's jacket, and his opinion was they were jerked upon it while the woman was alive.

Mr. Ballantine.—The prisoner has stated that in lifting the head of the deceased, after death, the blood fell upon his clothes.

Mr. Ross.—The appearance I saw could not have been so produced, and so long after death. I don't think it possible at all.

Dr. Henry Letheby, a physician, and professor and lecturer on chemistry at the London Hospital, was next called and deposed as follows: On Monday last I received from Sergeant Townson, of the police, a jacket, waistcoat, and trousers, and two paper parcels, one containing scrapings from a plaster wall, and one from the panel. I first examined the jacket, and found spots and patches of blood in the following places:—First, there was a large patch of blood interrupted by the folds of the sleeve upon the front and about the middle of the left sleeve; secondly, there were some other spots on the same sleeve nearer to the shoulder on the front part, some also in the inner part of the left lappel, other spots on the inside of the right lappel, and some on the back part and outer part of the left sleeve about midway between the elbow and the shoulder. On the waistcoat I found the following spots:—Several on the front and middle of the right collar, which was a turn-over one; some other small spots, as if from a jerk or a jet of blood, on the front on the right side, a little above the waistcoat pocket; and others much larger on the front of the waistcoat, as if from jets; lastly, there were two large spots on the waistcoat close to the upper button hole. Portions from all these was scraped off, and carefully examined by the microscope. Those upon the sleeves were found to contain blood-globules that could only be recognized by the microscope, imbedded in coagulated fibrin. The patch on the middle of the left arm also contained scales or scurf, similar to those found on the woman's scalp. There was a piece of brown hair also imbedded in it. The spots were further examined chemically. On scraping off portions and digesting them in water, little white *flocculi*, called *coagula*, and a deep pink solution were obtained. The solution had the following characters, proving it to be blood:—First, it had a pink colour, and that colour was not heightened or rendered green by ammonia, showing it was not a vegetable colour; it was rendered dark by sulphuric acid. It was also coagulated on being boiled, and gave a precipitate, or *flocculi*, with nitric acid, corrosive sublimate, and nitrate of silver. I then examined the scrapings from the wall. The mixture demonstrated the presence of *flocculi*, and *coagula*, and the rest being digested in water gave the same results as the former. The examination of the wood-scrapings led me to think they were not blood, but I will not speak positively as to that. On Tuesday morning I also received from Sergeant Townson a large piece of matting, marked with a large blood-stain, and a piece of wood similarly marked. On examining the blood on the matting by means of a microscope, I found it contained globules, but no coagulated fibrin; there were also particles of scurf, like those on the human scalp; the chemical examination proved the spots to be blood-spots. The examination of the wood also led me to believe there was uncoagulated blood but no fibrin in it. The conclusions I have come to by reason of the inquiry are these—1st., that the spots on the jacket, the waistcoat, the plaster wall, and matting, were blood spots; secondly, that the spots on the jacket, waistcoat and wall, resulted from living blood, while that on the matting resulted from dead blood, or occurred some time after life was extinct; thirdly, I conclude the blood came from the scalp, by reason of the scales; and fourthly, that many of the spots appear as if they had resulted from jets, and some from being rubbed on.

ABSENCE OF ARSENIC IN THE FŒTUS, THE MOTHER HAVING BEEN POISONED BY ARSENIC.

In a recent case in Belgium, arsenic was detected in the fœtus carried by a female, who had been poisoned by arsenic. M. Benoist of Amiens, lately communicated to the Society of Pharmacy of that town the following case in which the contrary was found to be the fact.

M. Benoist was charged with the examination of a young woman six months pregnant, who had poisoned herself by swallowing a considerable quantity of arsenic. The results of all his experiments perfectly demonstrated the cause of the mother's death. Not only was arsenic detected by means of Marsh's apparatus, but the poison was collected in substance on the internal surface of the stomach, and readily reduced to the metallic state.

The fœtus was at the sixth month of development, and was carefully examined in order to ascertain whether it had died in consequence of absorbing the poison which had destroyed the mother. All the experiments with Marsh's apparatus, however, gave a negative result. The combustion of the gas yielded by the apparatus was continued for upwards of an hour without obtaining a trace of arsenic.—*Dublin Medical Press.*

TRIAL OF ELLIS THE WATER-DOCTOR

(Before Lord Chief Justice Tindal and Mr. Baron Rolfe.)

Dr. James Ellis, the proprietor of a hydropathic establishment at Petersham, surrendered to take his trial upon the coroner's inquisition for manslaughter. The inquisition charged that the prisoner, on the 29th of May, and on divers other days, made assaults upon Richard Dresser, and that he injuriously, rashly, negligently, and feloniously caused certain cloths, saturated with water, to be placed upon the body of the said Richard Dresser for a long period of time, and that he also rashly, injuriously, &c., placed him in a bath containing a large quantity of water, and that by these means he caused him to be mortally disordered in his body, and likewise occasioned a mortal congestion of the heart and lungs, of which he languished until the 2d of June and then died.

The inquisition likewise alleged that it had been taken in the city of London.

Mr. Bodkin and Mr. Huddlestone conducted the prosecution; Mr. Cockburn, Q.C., Mr. Prendergast, Mr. Clarkson, and Mr. Hance appeared for the prisoner.

Mr. Bodkin briefly stated the facts of the case, and said, this was not a case of the ordinary description, where death was the result of violence; but the prisoner was charged with having occasioned the death by rashly and improperly treating the deceased in a medical capacity; and he, on the onset, would admit that there did not appear to have been any neglect of the deceased by Dr. Ellis, but that, on the contrary, he had treated him with great kindness and attention. Still, however, if he should make out that the death of the deceased had been accelerated by the improper treatment to which he had been subjected, it would render the defendant amenable to the present charge. The learned counsel then proceeded to state the facts of the case, and the following evidence was adduced:—

Mr. Thomas Hubert deposed that he had known the deceased thirty years, and he carried on in his lifetime the profession of an accountant in Eastcheap. Some time prior to the 29th of May, the deceased had complained of being poorly, but on that day he appeared to be suffering very much, and complained of severe rheumatic pain. Dr. Ellis came to the house the same afternoon at the request of the deceased, who told him he was in great pain, and he was glad he was come, as he thought he could do him good. The doctor said, that if he had made up his mind to try his system, he would take him in his carriage to Sudbrook-park, Petersham, to his establishment that afternoon, and the deceased consented, and it was arranged that they should meet at half-past two o'clock, in Sackville-street, Piccadilly.

Cross-examined—Believed the deceased had known Dr. Ellis a considerable time, and he frequently heard him speak of him. The deceased was a great advocate of the hydropathic system, and had published a book containing cases of cures effected by it.

Mr. W. G. Dresser deposed that the deceased was his cousin, and he considered him a strong healthy man. He had an attack of jaundice about two months ago, but had perfectly recovered from it. He saw him on the 28th of May, and he then complained of sciatica or rheumatism in the hip, and appeared to be in very great pain, and he did not see him again until he was lying dead in the doctor's establishment at Petersham. He observed a quantity of froth had issued from his mouth, and that the flesh was nearly black under the eyes and behind the ears. He had some conversation with Dr. Ellis, and upon his making some observations relative to the cause of death, he said he did not die of rheumatism, but of hepatitis; and he allowed that he only admitted him upon his own statement, that he was suffering from rheumatism, and that if he had known he had any disease in the liver he should not have done so. Dr. Ellis then said he would give him a diagnosis of the case, and he afterwards handed him the paper (produced), and at the same time said he should be very glad to meet any medical man at a post-mortem examination; and expressed great sympathy for the widow of the deceased

Cross-examined—Witness was aware that Dr. Ellis and the deceased had been on the most friendly terms for a long time.

Mrs. Harriet Dresser, the widow of the deceased, deposed that she went to Sudbrook-park the same evening her husband had been taken there by Dr. Ellis. This was on the 29th of May. About six weeks before he had had an attack of jaundice, but had recovered, and at this time he only complained of rheumatic pains. She had known Dr. Ellis for a good many years; he was formerly in the lace trade. She arrived at the doctor's between five and six o'clock in the evening, and found her husband in bed, and she understood that he had had a bath. She saw him again on the Sunday; he was in bed; and appeared very ill. At this time he had wet bandages and blankets round him, and a bath was brought into the room, and water put into it while she was there. She saw him again on Monday, and the deceased complained of his legs, and said they were perfectly useless to him, and she felt them, and found they were as cold as marble. The doctor came into the room, and she told him what her husband said, and he wetted the end of a long towel, and placed it to the stomach of the deceased. Before he did so he asked him if he dreaded it; and on the deceased replying that he did not, he placed it on him, and he said he did so because he was afraid of inflammation. The doctor then requested her to leave the room, as her husband was going to have a bath. She saw him again shortly afterwards, and she observed that his countenance was changed very much, and that he had great difficulty in breathing; and upon her calling the doctor's attention to these symptoms, and asking him what he thought of them, he said they were not desirable. Upon her taking leave of her husband and kissing him, she observed that his lips were quite cold. As she was about to leave the establishment she received a message from the doctor, requesting her to come to him in the grounds; and he then asked her if the condition of her husband were not satisfactory the next day, if she would like to have him removed, or to have further advice. Her husband was very anxious to

try the new system, and said he thought it would cure him.

Cross-examined—Deceased had suffered a good deal of pain before the 29th, but she thought he was better on that day.

Mr. Cockburn put a letter into the witness's hand, dated the 29th, and she admitted that it was written by her to Dr. Ellis at her husband's request. In this letter she had represented the deceased to be "prostrated by pain, helpless as a child, and unable to walk."

Cross-examined—The deceased could not walk, and he was assisted into the doctor's house. On Sunday he told her that all his pains had left him, and that he had been able, with the assistance of Dr. Ellis, to walk on the grounds of the establishment; and he also said, that if the doctor had been his brother, he could not have shown him more kindness. After her husband's body was brought home, a post-mortem examination was made by Dr. Waterworth, the medical gentleman who had been in the habit of attending upon the deceased, but no one was present on the part of Dr. Ellis.

Mr. Cockburn—Now my friend has asked you a question, which, I think, might as well have been spared, with regard to Dr. Ellis having formerly been in the lace trade. Are you not aware, madam, that he has been abroad and studying for the medical profession in foreign universities, and has undergone a regular course of attendance at the hospitals to qualify him for the duties of that profession?

Witness—I am aware that he has been abroad for several years, but do not know, of my own knowledge, that he was studying at any foreign university.

Mr. Charles Waterworth deposed that he is a surgeon, and resides in the New Kent-road. The late Mr. Dresser had been his patient, and he had known him for seven years. The deceased had an attack of jaundice about six months ago, for which witness treated him, and he recovered from it. In March he had a similar attack, but slighter, and he recovered in a few days. He should say that the deceased was a man who might be considered healthy, but he certainly was not a robust man, and his powers were feeble and his constitution languid. He made a post-mortem examination of the body of the deceased. He first examined the chest, and found blood exuding from the lungs, which were very much gorged with blood. The heart was also gorged with blood, and these appearances, in his opinion, sufficiently indicated the cause of death. The appearances of these organs accounted for the coldness of the body described by Mrs. Dresser, and the difficulty of breathing, which would be the symptoms of approaching dissolution from such causes. The diagnosis written by Dr. Ellis was given to him, and he compared it with the appearances presented upon the post-mortem examination. They only corresponded in one or two particulars; and there was no trace of the disease of hepatitis, which was stated by the defendant to be the cause of death, or any suppuration of the liver or viscera. He considered the use of baths and the application of cold water to have been highly improper to a person in the condition of the deceased, as they had a tendency to produce the congestion of the heart and lungs to which he had referred, and more particularly in a person in whom the circulation was languid like the deceased than in a person of vigorous constitution. He should also say that, in his opinion, the application of a wet cloth to the stomach of the deceased on the Monday, when he was in the condition that had been described, was highly improper, and in his judgment, taking into consideration the state of the lungs and heart of the deceased, such a proceeding was calculated to accelerate his death.

Cross-examined—Although he expected that the effect of the post-mortem examination would be contradictory to the diagnosis of the case given by Dr. Ellis, he gave him no notice when it was to take place, and no one was present but himself and his partner, Mr. Hicks. He did not consider whether it would not have been fair to give Dr. Ellis an opportunity of being present at the post-mortem examination. He should consider that bathing applied to any part of the body of a patient in such a state would have been injurious and improper. He would not actually pledge himself as to the cause of death. It would be impossible to do so in such a case. The deceased was what might be termed a healthy man, but he did not mean to say by that that he was free from all malady. If the brain had been congested, it might have accounted for the congested state of the heart and lungs, but he did not open the head to see the state of the brain.

Re-examined—He should say that a bath at a temperature of 85 was too cool for the patient to be placed in, and the effect of such a bath would be to drive the blood from the extremities to the internal organs.

Mr. James Hicks, the partner of the last witness, who assisted in the post-mortem examination, said that the body presented all the appearances of a man who had been drowned. The face was bloated, and bloody serum issued from the mouth and nose. The lungs were enormously gorged with blood, and the heart enlarged and flabby. In his opinion, the application of cold water was highly improper in such a case.

Cross-examined—Before witness entered into partnership with Mr. Waterworth, he acted as assistant to a gentleman who had the medical charge of a large union in Hampshire. At the present time hardly a week passed but he was present at a post-mortem examination.

Mr. Cockburn inquired whether this happened from so many of his patients dying? (Laughter.)

The witness replied, fortunately not; but although he was in practice he took every opportunity he could of attending the hospitals, to witness post-mortem examinations, with a view to obtain all the knowledge he could.

Cross-examination continued—He did not examine the head of the deceased, because he considered he had found quite sufficient causes of death in the congested state of the heart and lungs. The cold state of the extremities and the difficulty of breathing might be produced by many diseases; but in this case he should say they were occasioned by the congestion of the lungs. Some diseases of the brain might cause congestion of the lungs.

Two persons in the service of Dr. Ellis, and who were engaged in superintending the baths, were then examined. Their evidence merely went to show that the deceased was put in a bath at a temperature of 85 degrees on the Friday, Saturday, Sunday, and Monday, in the morning. It appeared that he remained in the bath 90 seconds, and he was then rubbed dry, and was placed in bed. They also proved that wet bandages were applied to him, but they denied that there was any application of the bath after Monday afternoon, when the deceased appeared in the state described by his wife.

In cross-examination, they said that on the Saturday and Sunday the deceased appeared very much better, and that he stated the baths had done him a great deal of good, and he was able to walk, and he likewise said that he felt very much better since he had been under Dr. Ellis. The doctor, it appeared, also sat up with the deceased all Sunday and Monday night, and appeared anxious to do all he could to relieve him, and the deceased all along expressed satisfaction at his treatment.

This was the case for the prosecution, and the court and jury adjourned for a short time to take some refreshment.

Mr. Cockburn then addressed the jury for the prisoner, and he commenced by observing, that the present charge differed from every other in this respect; that whereas in

every other case the law required a guilty intention to be proved or inferred; yet, in this instance, if a person acted with the utmost kindness, and showed the strongest desire to benefit his patient, if death, notwithstanding his exertions, unhappily ensued, he still might be amenable, to the charge of manslaughter. The learned counsel then proceeded to express an opinion that the jury ought to dismiss entirely from their minds all consideration of the merits of the hydropathic system; he considered it had nothing to do with the case. It might be a very good system, and possess all the advantages claimed for it by its supporters, or it might be, as was represented by others, a delusion and an imposture; but the only question for the jury was, whether, under all the circumstances of this case, they could come to a conclusion that Dr. Ellis, in his treatment of the deceased, had acted with such criminal rashness and want of caution as would justify them in finding him guilty of the crime of manslaughter. He then proceeded to comment upon the facts, and said it appeared perfectly clear that the deceased had gone to the doctor's establishment of his own accord, and that the doctor was ignorant of his suffering from anything but rheumatism. The treatment at first was most successful; for, inasmuch as it appeared from the deceased's own admission that when he first went there he was "prostrate with pain, helpless as a child, and unable to walk," it was shown that in a day or two he was entirely free from pain, and able to walk in the garden with a little assistance. Was not this calculated to induce Dr. Ellis to persevere in his treatment? And if, unhappily, by so doing, he had aggravated another mortal disorder, of the existence of which he had no idea, surely it would be too much to say that he had thereby subjected himself to the charge of manslaughter. The learned counsel then proceeded to comment at some length upon the medical testimony, and observed, that he thought it would have been but fair to Dr. Ellis if he had been allowed an opportunity of being personally present at the post-mortem examination, or of having some one there on his behalf. He likewise called the attention of the jury to the fact, that it was admitted, although some diseases of the brain might have occasioned the congested state of the lungs, yet that organ was not examined; and, for all the jury knew to the contrary, it might, if the examination had taken place, have entirely accounted for the appearances which presented themselves on the body of the deceased. The learned counsel concluded a very eloquent and able address by calling upon the jury to acquit the prisoner, and not to destroy for ever his prospects in life by finding him guilty of so serious a charge upon such slight testimony.

Lord Chief Justice Tindal then summed up, and the jury, without any deliberation, returned a verdict of Not Guilty.

The defendant was immediately discharged from custody. —*Times.*

CASE OF MAL-PRACTICE.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—A case of mal-practice has just been before our Superior Court, which is not without interest to the profession. Dr. J. S. Oatman, of this city, a reputable physician, attended a carman, æt. 64, for a comminuted fracture of the femur near the condyles. The patient being an aged man, and suffering under depraved health at the time, had also an erysipelatous affection of the limb of some months' standing, accompanied with œdema of the injured leg. The inflammation and swelling which supervened immediately after the accident, precluded any very accurate diagnosis, and the morbid condition of the patient, and especially of the limb, forbid any considerable pressure, either by bandages or the application of extension. The posture found to give the patient most comfort was that of semi-flexion, and the double inclined plane was adopted, the apparatus of Palmer and Roe being preferred, upon which the limb was placed, and suitably secured. At the proper time, the usual attention was paid to the careful adjustment of the fragments of the bone, and all the extension and counter-extension which was admissable, seems to have been duly made. On the 30th day the fracture was found firmly united by Dr. Chessman, who examined it, and the limb being measured, was found shortened two or two and a half inches.

At this juncture, a young physician in the neighbourhood called in to see the patient, without the knowledge of the attending surgeons, and with the consent of the patient, invited Drs. Parker and Wood to visit him, both of whom gave it as their opinion that no surgical treatment was called for, or would be admissable. A son of the patient soon after called upon Dr. Oatman, and significantly intimated a proposition to settle with him for a quid pro quo, as the only alternative to a suit for mal-practice; the shortening of the limb being now made a ground of complaint, unskilfulness and neglect being alleged, &c. The doctor, not relishing such ingratitude in lieu of his fee for faithful services, was not very patient under it, resenting it as an outrage, and acted accordingly. After six months had passed, the suit was brought, and the testimony of Drs. Mott, Parker, Wood, Reese, Post, Chessman, &c., was so conclusive and unanimous, that the Plaintiff's counsel would have submitted patiently to a non-suit, but the jury acquitted the defendant, so that his triumph was complete.

Enclosed you will find a newspaper report of the testimony, should your limits allow its use.

Medicus.

New York, June 22, 1846.

On the trial the Counsel of the Plaintiff, as instructed, attempted to show that the fracture had been badly managed; that the apparatus used was not the best; that there was not sufficient extension and counter-extension used to prevent the shortening of the limb, and that there had been thus a want of attention and skill on the part of the doctor, by reason of which he was left a cripple. But his case was overthrown by his own witnesses, Dr. James R. Wood and Dr. Parker, both of whom examined the limb after some thirty days, and agreed that it had been a bad case of crushed bone, in which the shortening of the limb was unavoidable, under any amount of skill; and the latter gave it as his judgment that the patient was exceedingly well off to have recovered from such an accident with both his life and limb, and with no other disaster than a short leg.

But, though Dr. Oatman might here have rested his case, and submitted it to the Jury on the prosecutor's own testimony, yet his Counsel deemed it due to his professional character to proceed to show, by witnesses well known for their surgical skill and experience, that he was blameless in this case and its results.

Dr. Valentine Mott, a surgeon of forty years' experience, testified that more or less shortening of the limb is uniformly the result after fractured thigh, even in the most favorable circumstances; but that the age of this patient, the bad character of the fracture, the erysipelatous state of the limb, and all the circumstances, were averse to a favorable result, and likely to increase the extent of the shortening.

Dr. David M. Reese is a physician and surgeon of twenty-five years' practice, and testified that from the nature of the injury as described by the witnesses, there could be no doubt that it was an oblique and comminuted fracture, which is always unfavorable, and renders a shortening of the limb inevitable. In such a fracture there is always injury of the soft parts, which complicates the case by increasing the risk of inflammation and swelling, and renders it liable to be followed by irritative fever and other constitutional disturbance.

The age of the patient was unfavorable; the erysipelas, and especially the dropsical swelling of the limb alleged to be present, would forbid any considerable extent of pressure by bandages, or extension of the limb, without risking the loss of both limb and life. The Dictionary of Dr. Cooper, shown by him, was regarded as good surgical authority by the profession everywhere, and had been edited by himself, all the notes having been republished in London by the author in his last edition.

Dr. A. C. Post, one of the surgeons of the New York Hospital, stated that in such a fracture the injury to the soft parts would interfere with the extension of the limb; and has known two cases in which the attempt to make extension and counter-extension resulted in mortification, and the thighs had to be amputated. The age of the patient and diseased state of the limb increased these dangers. In all such cases, a very considerable shortening of the limb takes place under the best treatment and care, and the removal of the foot bandage by the patient, as in this case, would increase it. In half an hour after such an accident, he has known the swelling to be so great as to forbid any success in ascertaining definitely the nature of the injury.

Dr. Chessman, a physician and surgeon of long experience, saw this patient with Dr. Oatman, with great difficulty inspected the thigh, being opposed by both the patient and his friends. He found that it had been an oblique and comminuted fracture, now united. He found the limb shorter than the other, as it uniformly is in such cases. He never knew an exception, and concurs fully in the opinion that the age and morbid state of the limb in this case forbid any greater extension or pressure than was used, and was obstructed in his inquiries by the disturbance and resistance made to his examination.

Similar and corroborative testimony was given by Dr. Dickinson and Mr. McCord. Dr. Shepherd was then examined, who had attended the case throughout, and bore testimony that there was no want of attention or skill on the part of Dr. Oatman, who manifested throughout a becoming interest in the patient's welfare. He proved the morbid state of the limb, the disturbance of the bandage by the patient, and the adverse circumstances which had to be contended with in the management of the case.

Dr. Stoothoff testified that he accompanied Dr. Chessman and Dr. Oatman on their visit to the patient, and learned from the latter that Dr. Cockroft, junior, had been there, and the son confessed that he had denied it, to conceal this clandestine visit.

In the progress of the trial there was a display of surgical apparatus, thigh bones both sound and broken, together with a beautiful model of the thigh taken from the Anatomical Venus, now exhibiting at the American Museum, recently imported from France by P. T. Barnum, Esq., who kindly loaned it for the purpose of enlightening the court, bar and jury, as to the muscles concerned in fractured thigh.

The Jury returned a verdict for the defendant.

THE

British American Journal.

MONTREAL, SEPTEMBER 1, 1846.

LAKE SUPERIOR COPPER MINES.

The public eye is directed with a good deal of attention, at the present moment, to the exploration for silver and copper ore which is now taking place in the mineral region on the Canadian or northern shore of Lake Superior. It is well known that three or four companies for mining purposes have been formed, who have located themselves on Spar Island, Mamainse, Michipicoten, and St. Ignace. The Provincial Geologist is prosecuting his researches in that district at present; and, in anticipation of his report, which will be eagerly looked for, we furnish our readers with all the information which we have been enabled to collect on the subject.

For several years past, it is well known that the copper and silver region on the southern shore has been most successfully worked by several American companies. Mr. C. T. Jackson of Boston, who was employed two years ago by the Lake Superior Copper Mining Company, has furnished a valuable report in the American Journal of Science and Arts for July, 1845, on the copper and silver ores, and general geological features of Kewenaw Point in that Lake. The late Dr. Douglas Houghton, whose untimely death by drowning, in the prosecution of his labours, has caused deep regret, preceded Mr. Jackson in the survey of that region. The final report, however, of his labours has not yet been received; but, if to be completed, will contain a minute account of the geological formation of the whole of that district, and of the metalliferous rocks in particular. On Kewenaw Point, copper is largely diffused through the rocks, both native and in states of chemical combination. The conglomerate which abounds here, contains veins of calcareous spar, in which copper in a native state, as well as carbonated, exists. The hydrous silicate of copper or chrysocolla, which is also met with in this conglomerate, when free from rock, contains 25 to 30 per cent. of copper. Black and brown silicious oxides are also met with, which have yielded, by analysis, 51.08 per cent. of copper, and a very minute proportion of oxide of iron. In the conglomerate of Copper Harbour, a vein of black oxide of copper was discovered, yielding as much as 68 to 70 per cent., and is the most valuable ore met with in this locality.

At Kewenaw Point native copper is found abundantly. It is met with disseminated in trap, but is most abundant in the amygdaloidal variety. It is met with occasionally in masses, weighing many pounds. Nine veins of native copper have been discovered on the locations leased to the company, but of these only two or three have been worked as capable of furnishing any valuable return.

At Eagle River, copper is found in large quantities alloyed with silver. In an amygdaloid trap, this alloy is found to constitute from 10 to 30 per cent. of its weight. The crevices and veins of the rock are filled with thin sheets of it, and lumps of considerable magnitude are occasionally found.

The following results of the analysis of the Eagle iron, copper, and silver ore, are given. "The value of the rock per ton is as follows:—It yields in 50 lbs.,

silver, 763.8 grs.=$1\frac{74}{100}$ oz.; equal to 4 lbs., 5 oz, 364½ grs. per ton; value, $87.25. Copper, in 50 lbs. rock, 6 lbs., 9½ oz.=per ton, 263 lbs.; value, $42.10. Value of one ton of the rock, $129.35."

Such, then, are the chief results at Kewenaw Point and Eagle River (8 miles from Eagle Harbour), and there is every reason to believe that the northern shore abounds with even richer ore. On this subject, however, our information is as yet but scanty. At Prince's Harbour, the grey sulphuret, one of the most valuable of the copper ores, abounds. It occurs in a vein, composed of calcareous spar, barytes, and amethystine quartz, which is about 15 feet wide, the metalliferous portion being about 4 feet 8 inches. We have seen fine specimens of it, as well as the metal in its native state, carbonated, and presenting argentiferous indications, sent to this city from the region. No analysis has yet been perfected.

The scenery at Prince's Harbour is said to be, by a talented correspondent, beautiful. "Lofty cliffs guard the whole coast. They are precipitous, or I should say vertical, for some distance at the summit, and then slope down at an angle of 45°, making a *talus* to the water's edge. This form is very general, and it arises from the geological structure. The whole country seems to be a trap underlaid by a shale. The trap gives a vertical face, the softer shale beneath gives the *talus*. An infinite number of trap dykes exist, which have a general parallel course, running N.E. and S.W. The metallic veins cut these at right angles, and run N.W. and S.E. The parallelism of the veins is considerable."

If datholite and calcareous spar are found on the northern shore as they are on the southern, the operation of smelting will be very considerably economized by being done on the spot. These minerals constitute the best fluxes for the trap in which the ores are chiefly met with.

Medical Matters in Canada.—The above is the heading of an Editorial paragraph in the Boston *Medical and Surgical Journal*, of the 19th August, and in the London *Lancet*, of the 25th July, and under it both of our contemporaries, have given extracts from a speech by Dr. Wolfred Nelson, in the Legislative Assembly, (reported in the *Pilot* newspaper of the 20th June,) on the occasion of the usual Legislative grant to the Medical department of the University of M'Gill College. We doubt not, from thus perceiving a notice of that report by two of our contemporaries, so widely separated from each other, that it has been very generally, and industriously distributed, for an object too conspicuous to escape detection. Were it not for this circumstance, the silence which we have hitherto observed on the subject, would have been farther maintained. We had determined to render this Journal, (since the decease of the *Medical Gazette*, whose line of policy was very different,) the advocate to favour of no particular school; we had resolved to exclude all topics which might tend to the advancement of one school of medicine by derogating from the merits of another; and every subject of medical polity, which circumstances have compelled us to notice, have been treated with a single eye to the general good of the Profession, and not of particular parties in it. Keeping in view this principle, we avoided all notice of Dr. Nelson's speech at the time of its delivery, and, great although the provocation was, we passed in silence the aspersions on the Medical Faculty of M'Gill College, with which it teemed. In the House, his denunciations were productive of no effect; and out of it, we felt assured that so far as this Province, and city in particular, were concerned, they would, from his known interest in the Incorporated School of Medicine, *be estimated at their proper value*, rendering a refutation, had it not clashed with our principle, a work of supererogation. It was natural for him, with the object which he had in view, to laud that school with which his name was blended, and to disparage as much as he could, the one of which he is a professed antagonist. He did both with that ingenuity and fertility of imagination for which, in these matters, he is conspicuous. He "mounted his assumptions, and then he rode them" beautifully.

If our silence on this subject has been hitherto a virtue, it would, now that his speech has been noticed in two important medical periodicals, (in one with some prudently expressed distrust as to the correctness of its statements,) degenerate into a crime, and we feel persuaded that on the present occasion our subscribers will pardon, when they reflect on the subject, this temporary deviation from our rule of action. We mean not to dissect the speech, nor to expose *seriatim*, the errors, and distortion of circumstances with which it abounds. We think that our columns might be much more profitably occupied, than by descending to particulars, in which a very large majority of our readers can take no interest whatever. The extracts given by our contemporaries will meet with a rebuttal in a much more legitimate manner, than through the columns of this Journal.

From an observation at the conclusion of the paragraph, in the London *Lancet*, which has drawn forth these general comments, we infer that this Journal has not been received with regularity at that office. We assure our London contemporary that it has been regularly sent by our publisher, which is all we can do to

keep him supplied with *authentic* information on "Medical matters in Canada."

Medical Board for the District of Montreal.—At the August quarterly meeting of this board, the following gentlemen received, after examination, their certificates of license to practice.

As Physicians, Surgeons, and Accoucheurs,

Thomas Wallace,

R. Hunter,

G. Duguay.

As Apothecary, Chemist, and Druggist,

M. Parkin.

LETTER III.

To the Editors of the British American Journal.

GENTLEMEN,—I think I have already adduced presumptive evidence of some weight relative to the nature of the cause of our present debasement as members of one of the liberal professions. But we are furnished with examples on every hand of the advantages that result from a prevailing spirit of concord among individuals engaged in the same pursuit, and who have one common interest to protect and sustain.

That famous watch word, "union is strength," has served as a rallying cry of the oppressed from time immemorial. At the present period, and especially in countries where the representative form of Government exists, the dictates of that aphorism, when fully carried out, have been found to produce moral effects not inferior to their physical influence in past times. Let us notice briefly a few familiar instances. The politician, individually a mere cypher, unites himself with others entertaining opinions similar to his own, when straightway he becomes powerful. The teachers of our religious faith, one and all, inculcate the doctrine that "the labourer is worthy of his hire;" the cry "give us our daily bread," is repeated and made to ring its various changes upon the minds of the multitude until their just demands are granted. The Lawyer, as I have already shown, forms a strong bond of union with his fellows, and obtains, with little labour or trouble, all that he asks for. The union of a few British philanthropists produced the abolition of slavery throughout the empire in spite of a most powerful opposition, and at a cost to the British nation of an incredible sum of money. Catholic emancipation, and parliamentary reform, were both results of a union of parties having these objects in view. And the recent repeal of the corn laws in England, affords another and yet more remarkable example of the wonderworking power of union when followed by energetic action. Shall we then, with examples such as these before us, with incentives to exertion as strong as any of the cases here cited could furnish, remain always irresolute, always divided? Shall the darling interests and hostile prejudices of rival schools, and political partizans, in one section of the Province, and the absurd pretensions of a few disciples of a quasi privileged institution situated in another hemisphere of the other, be permitted always to control the movements of the great body of the profession? Shall we continue to present to the world the spectacle of a body of men ever complaining of the wrongs they suffer, yet so divided in their councils, so torn by internal dissension, as not to be able to agree upon any rational plan of action for the removal of those wrongs? I cannot believe that the existence of such a state of things can be felt and acknowledged without an effort to overcome it. It is impossible that among the one thousand educated and intelligent gentlemen, who represent the profession in this colony, a sufficient number cannot be found who, seeing and feeling the manifold evils that time and circumstances have inflicted upon them, are willing, nay, anxious to remove them, and by one strong united and well directed effort to place themselves on a level with their contemporaries. That most efficacious of all provocatives, public ridicule will force this alternative upon them if their own interests and honor should fail to do so.

It is not to the metropolitan portion of the profession that we are to look for the power by which this great object is to be attained, it is the force of numbers alone that can effect it. A system of organization must be adopted that will extend itself over the whole province, from Sandwich to Gaspe. From all the towns and villages invitations should go forth from societies or influential individuals, to every licensed practitioner within the limits of each district, to assist with his advice and influence in furthering the grand object, and let it be proclaimed that the object embraces *protection for ourselves, an elevated standard of education for the rising generation, and nothing more!*

The Medico-Chirurgical Society of Toronto have thought proper to take the initiative in this matter, and I have every reason to believe that they are influenced by a sincere desire to do what is right, but there is one objection that applies to them as well as to our friends at Montreal; they are not sufficiently acquainted with the real wants of the country practitioner, and it is this overworked, ill paid, but most meritorious portion of the profession who stand most in need of protection. The country practitioner has been made the tool, I am sorry to say, of his citizen confrere on more occasions than one, but he has been taught, I should hope, by experience, to acknowledge the folly of such passiveness. If the Medico-Chirurgical Society of Toronto or Montreal, or

any other body of practitioners in those cities, will lay aside all party or sectional motives, and come forward with a practically useful and comprehensive measure, it might be well, on many accounts, to submit to their leadership. But gentlemen in the country must bear the fact in mind, that business, to be well and satisfactorily conducted, must be superintended by the parties immediately interested. Past experience, however, has shown how difficult it is to assemble a large body of medical men at a distance from their homes, and in many instances good reasons might be assigned for the refusal of individuals to attend such meetings; but this difficulty might be obviated in a great measure by the appointment of proxies, with full instructions from their principals.

Supposing the attention of the great body of the profession to have been awakened by the means suggested above, I should think that a plan of ultimate procedure, something like the following, might be adopted. If the societies of Toronto and Montreal, and four or five of the district societies, would each draft a bill to incorporate the profession in two distinct colleges, and then appoint a central committee, composed of delegates and proxies, whose duty it should be to form, out of the materials thus furnished, one bill embracing the views, as far as possible, of all the societies, there can be little doubt that the wishes of the profession would be fully met. A petition founded upon this bill, and embracing the principal features of all its clauses, should then be drawn up, printed, and transmitted to every practitioner in the Province. All this, it is true, would be attended with some trouble, but the pecuniary cost would be trifling. As a means of procuring signatures for the copies to be afterwards laid before the Legislature, each recipient of a printed copy might be directed to return his copy to the central committee with his name written at the bottom over the word approved, and in case of disapproval to retain it, the postage, which for a printed copy would be only a half-penny, to be paid both ways by the addressed. Signatures obtained in this way could then be transferred to the manuscript copy for presentation, the committee vouching for them. These hints are offered without apology, because the writer knows they will be taken only for what they are worth. There is one most important question united with the subject of these letters, to which I must beg to direct the attention of the reader.

A claim put forth by a respectable and well known institution—the Montreal Medical School—has been made the subject of an able editorial in one of the numbers of your Journal, and the arguments employed to combat the pretensions of that school, and to show the impolicy of increasing the number of institutions having the power of granting *ad practicandum* diplomas, appear to me to be unanswerable. I approach this subject with diffidence, because I feel that I am treading on dangerous ground, but I cannot permit any consideration of a purely personal nature to interfere with the expression of my opinions upon a subject of such vast importance. Whether the gentlemen connected with the school referred to, propose to follow up their claim at the next meeting of parliament, I am not qualified to say, but I cannot hesitate to declare that the concession of that claim would be productive of the most serious injury to the profession, and by its effects as a precedent, to the best interests of the public generally. The evils resulting from a union of the duties of teaching and licensing in the same hands, have been ably set forth, not only in the editorial above alluded to, but more recently by Professor Stewart of New York, and I am persuaded that every unprejudiced mind who has read the address of that gentleman, (republished, I believe, in the June number of your Journal,) will agree with me, that no greater evil could befall us than the adoption of a system such as that practised in the United States. I agree entirely with the movers of the resolution passed at a late medical convention in New York, which proposes a separation of the duties of teaching from those which pertain to the granting of diplomas or licences, and I am decidedly of opinion that the privilege of granting diplomas, having the character of licenses, should not only be refused to the School of Medicine, but that it should be taken away, if possible, from every other institution in the Province by which it is at present enjoyed. The welfare of the public, and the respectability of the Profession, both imperatively demand that the examinations of candidates for license should never be conducted by parties connected with them as public or private teachers.

I am, Gentlemen,

Your obedient servant,

M. D., &c.

Toronto, August 20, 1846.

BOOKS, &c., RECEIVED.

The Canadian Magazine. No. 4.
Annual Catalogue, University of State of New-York.
Stockton's Dental Intelligencer. No. 10.
Minutes of the Proceedings of the National Medical Convention, held in the city of New-York, May, 1846.
Illustrated Botany. No. 6.
Buffalo Medical Journal. No. 3.
St. Louis Medical and Surgical Journal. No. 2.
Dublin Medical Press. July 8, 15, 22, 29.
New-York Medical and Surgical Reporter. 21, 22.
Medical Examiner. No. 20.
Boston Medical and Surgical Journal. Vol. xxxv. 1, 2 and 3.
Southern Medical and Surgical Journal. No. 8.

Bill of Mortality for the City of Montreal, for the month ending July 31, 1846.

Diseases.		Male.	Female.	Total.	Under 1.	1 & under 3	3 — 5	5 — 10	10 — 15	15 — 25	25 — 35	35 — 45	45 — 55	55 — 75	75 upwards
Epidemic or Infectious,	Measles,	4	15	19	5	10	1	3	.	.	.	.			
	Scarlatina,	.	2	2	.	.	1	1	.	.	.	.		.	
	Small Pox,	.	1	1	.	1	.	.	.	.	.	.			
	Fever,	12	12	24	14	1	2	2	.	1	3	.		1	
Diseases of Brain and Nervous System,	Water on the Brain	1	1	2	1	1	.	.	.	.	.	.			
	Dentition,	4	8	12	4	8	.	.	.	.	.	.			
	Convulsions,	5	2	7	7	.	.	.	.	.	.	.	.		
	Paralysis,	.	1	1	.	.	.	.	.	.	.	.		1	
	Apoplexy,	1	.	1	.	.	.	.	.	.	.	.		1	
	Delirum Tremens,	1	.	1	.	.	.	.	.	.	.	.	1		
Diseases of the Thoracic Viscera,	Consumption,	30	39	69	26	10	.	.	2	2	9	8	8	4	
Diseases of Abdominal Viscera,	Diarrhœa,	14	14	28	18	6	.	.	.	1	.	2	.	1	
	Worms,	1	.	1	1	.	.	.	.	.	.	.			
	Dropsy,	1	1	2	.	.	.	.	.	.	.	.	.	2	
	Jaundice,	.	1	1	.	.	.	.	.	.	.	1	.	.	
Other causes and Diseases, and Diseases not specially designated,	Still-born,	3	3	6	6	.	.	.	.	.	.	.			
	Inflammation,	9	12	21	11	3	2	1	.	2	.	.		2	
	Drowned,	1	.	1	.	.	.	.	1	.	.	.	.		
	Debility,	1	6	7	.	.	.	.	.	.	.	.	.	3	4
	Unknown,	4	5	9	9	.	.	.	.	.	.	.			
	Accidental,	2	.	2	.	.	.	.	.	1	.	1	.		
	Sudden Death,	1	1	2	.	.	.	.	.	.	.	.	1		1
	Rheumatism,	.	1	1	.	.	.	.	.	.	.	.	.	1	
	Suicide,	1	.	1	.	.	.	.	.	.	.	1	.		
	Total,	96	125	221	102	40	6	7	3	7	12	13	10	16	5

Monthly Meteorological Register at Montreal for July, 1846.

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,	+78	+84	+69	+81.–	29 94	29.92	29.80	29.87	E.	E.	S. E.	Fair	Rain	Rain
2,	" 60	" 83	" 65	" 71.5	29.90	29.96	30.05	29.97	N.	N.	N.	Fair	Rain	Fair
3,	" 64	" 87	" 69	" 75.5	30.13	30.04	29.97	30.05	N.	N.	N.	Fair	Fair	Fair
4,	" 67	" 89	" 78	" 78.–	29.94	29.86	29.77	29.86	S.	S.	S.	Fair	Fair	Fair
5,	" 77	" 96	" 78	" 86.5	29.79	29.62	29.59	29.67	S.	S.	S. W.	Fair	Th'der	Fair
6,	" 72	" 83	" 65	" 77.5	29.60	29.65	29.77	29.67	W. by S.	W. by S.	W.	Fair	Fair	Fair
7,	" 64	" 84	" 64	" 74.–	29.78	29.76	29.84	29.79	W.	W.	W.	Fair	Fair	Fair
8,	" 63	" 80	" 67	" 71.5	29.80	29.77	29.77	29.78	W.	W.	W.	Fair	Fair	Fair
9,	" 67	" 82	" 75	" 74.5	29.80	29.76	29.75	29.77	W.	W.	W.	Fair	Fair	Fair
10,	" 74	" 90	" 70	" 82.–	29.76	29.72	29.78	29.75	W.	W.	W. N. W.	Fair	Th&rn	Rn&th
11,	" 73	" 87	" 78	" 80.–	29.75	29.67	29.66	29.69	W. by S.	W. by S.	W. by S	Fair	Fair	Rain
12,	" 72	" 80	" 62	" 76.–	29.69	29.73	29.82	29.75	W. by N.	W. N. W.	N. W.	Fair	Rain	Rain
13,	" 55	" 83	" 60	" 69.–	29.93	29.86	29.79	29.86	N. W.	N. W.	N. W.	Fair	Fair	Rain
14,	" 54	" 78	" 55	" 66.–	29.87	29.85	29.93	29.88	W.	W.	W.	Fair	Fair	Fair
15,	" 52	" 67	" 54	" 59.5	29.95	30.01	30.08	30.01	W.	N W by W	N W by W	Fair	Rain	Rain
16,	" 58	" 76	" 63	" 67.–	30.22	30.25	30.30	30.26	N. W.	N W by W	N W by W	Fair	Fair	Fair
17,	" 59	" 79	" 65	" 69.–	30.40	30.35	30 33	30.36	N W by W	S W.	S. W.	Fair	Fair	Fair
18,	" 62	" 88	" 64	" 75.–	30.30	30 21	30.21	30.24	S. W.	S. W.	S. W.	Fair	Fair	Fair
19,	" 64	" 85	" 65	" 74.5	30.15	30.06	30.02	30.08	S. W.	S. W.	S. W.	Fair	Fair	Fair
20,	" 70	" 93	" 77	" 81.5	30.30	29.94	29.93	29.96	S. W.	S. W.	S. W.	Fair	Fair	Fair
21,	" 72	" 89	" 76	" 80.5	30.04	30.01	30.01	30.02	S. W.	S. W.	S. W.	Fair	Fair	Fair
22,	" 76	" 88	" 71	" 82.–	30.05	29.96	29.90	29.97	S. W.	S W by S	S. W.	Fair	Rain	Rain
23,	" 70	" 88	" 75	" 79.–	29.81	29.72	29.70	29.74	S. W.	S. W.	S W by S.	Fair	Fair	Fair
24,	" 72	" 84	" 62	" 78.–	29.70	29.73	29.77	29.73	N. W.	N. W.	S. W.	Fair	Cloudy	Rain
25,	" 58	" 87	" 60	" 72.5	29.87	29.98	30.10	29.98	N. E.	N. E.	N. W.	Rain	Rain	Rain
26,	" 57	" 78	" 67	" 67.5	30.14	30.14	30.10	30.13	N. E.	N. E.	N. E.	Fair	Fair	Fair
27,	" 64	" 86	" 70	" 75.–	30.13	30.10	30.08	30.13	N. E.	N. E.	N. E.	Fair	Fair	Fair
28,	" 65	" 93	" 71	" 79.–	30.10	29.98	29.93	30.00	S. E. by S.	S.	N. E.	Fair	Fair	Fair
29,	" 70	" 89	" 77	" 79.5	29.88	29.81	29.75	29.81	S.	S. by W.	S. by W.	Fair	Cloudy	Cloudy
30,	" 64	" 72	" 64	" 68.–	29.74	29.74	29.73	29.74	E. by N.	E. by N.	E. by N.	Rain	Rain	Rain
31,	" 61	" 88	" 65	" 74.5	29.77	29.84	29.96	29.85	E. N. E.	E. N. E.	E. N. E.	Rain	Rain	Fair

Therm. { Max. Temp., +96° on the 5th. / Min. " +52° " 15th.
Mean of the Month, +75°.

Barometer, { Maximum, 30.40 Inches on the 17th. / Minimum, 29.59 " " 5th.
Mean of Month, 29.915 Inches.

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.—JULY, 1846.

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.			Rain inch on surf.	Weather.
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10P.M	Mean	7A.M	3P.M	10P.M	Mean	7A.M	3P.M	10P.M	Mean	7 A.M.	3 P.M.	10 P. M.		
1,	29.487	29.459	29.486	29.5001	73.2°	75.7°	66.3°	70.82	.603	.620	.587	.601	.76	.72	.93	.82	N.E. by E.	E. by S.	Calm.	—	Mostly clear. Detached clouds. Slight showers at 4h 50m pm.
2,	29.628	29.642	29.672	29.6541	67.6	75.5	61.2	67.22	.507	.606	.480	.516	.78	.71	.91	.80	N.	S.	Calm.	0.010	M'tly clear. Huzy. Aur. Pt N. 1 & 2 am.
3,	29.745	29.642	29.606	29.6323	67.2	75.0	58.4	65.62	.552	.462	.422	.451	.86	.55	.88	.74	E. by S.	E. S. E.	Calm.	—	Zenith clear. Hazy round hor. Fair.
4,	29.541	29.427	29.439	29.4394	66.7	75.8	67.2	70.26	.527	.619	.532	.579	.83	.72	.82	.80	Calm.	E. by S.	Calm.	—	Mostly cl'r. A few detached cl'ds. Fine
5,	29.270	29.247	—	—	76.3	85.0	—	—	.705	.491	—	—	.80	.42	—	—	S. by E.	NW.by W.	——	—	Cloudy. Clear intervals.
6,	29.435	29.433	29.474	29.4626	68.0	80.6	67.5	70.18	.558	.408	.402	.433	.84	.41	.61	.63	N. W.	N. N. W.	N.N.W.	—	Detached clouds. Halo r'nd sun at 10 am
7,	29.585	29.568	29.587	29.5790	64.4	77.0	65.0	67.21	.443	.280	.331	.345	.75	.30	.55	.55	Calm.	N. N. W.	Calm.	—	M'tly clr. Hazy. Wind in sud. gusts 3 pm
8,	29.558	29.483	29.492	29.5059	64.5	79.0	66.0	69.05	.432	.629	.504	.538	.73	.65	.81	.78	W.	S. by W.	Calm.	0.950	Cl'd to 4 pm. Slt r'n 6h to 7h 30m am.
9,	29.522	29.496	29.446	29.4907	70.5	75 0	70.2	73.14	.544	.669	.650	.645	.75	.79	.90	.82	Calm.	Calm.	S.S.W.	—	M'tly cl'd. Rg. 11h 45m am to 1h 20m pm
10,	29.495	29.457	29.547	29.4942	80.5	90.6	70.4	78.82	.763	.872	.618	.701	.75	.63	.85	.74	W. S. W.	Calm.	Calm.	0.160	*Th. no.to 1 pm. Heavy r'n&h'lst. ac.it.
11,	29.482	29.445	29.450	29.4752	76.1	76.2	74.0	73.18	.762	.709	.689	.659	.87	.81	.85	.82	S. W.	S.W. by S.	W. N. W.	0.210	Sud. sq. wind at 0h 45m. Pres. 11 lbs.
12,	29.497	29.473	—	—	73.8	80.0	—	—	.583	.588	—	—	.72	.59	—	—	W.N.W.	N. W.	——	not ap	Th, P'n'g, & r'n 1 to 5 pm. Th. 7 to 8 pm
13,	29.603	29.510	29.502	29.5314	60.0	77.2	61.7	64.06	.483	.573	.477	.466	.96	.64	.89	.78	N. W.	W. by N.	Calm.	—	Cloudy.
14,	29.614	29.666	29.721	29.6988	56.2	64.1	53 2	56.47	.415	.389	.302	.327	.94	.67	.75	.74	N. N. W.	N. W.	N.W.by W	0 035	Generally clear. Thunderst. 7 to 8 pm.
15,	29.831	29.838	29.887	29.8647	54.3	61.6	57.3	57.55	.323	.367	.402	.355	.78	.68	.88	.77	N.W.	N. by E.	Calm.	—	Mostly clear. Fine.
16,	29.945	29.945	29.946	29.9536	60.0	68.4	52.0	58.44	.448	.347	.322	.341	.88	.52	.84	.72	Calm.	S.S.W.	Calm.	—	Partially clouded. Auroral light 0 am.
17,	30.027	29.947	29.921	29.9441	59.2	70.2	55.6	61.87	.360	.381	.329	.368	.74	.54	.76	.69	Calm.	S. E.	N.E. by N.	—	Detached clouds. Mostly clear. Fine.
18,	29.921	29.858	29.842	29.7946	64.0	74.5	59.0	66.84	.466	.465	.434	.468	.80	.56	.88	.74	Calm.	E.	Calm.	—	Detached clouds. Mostly clear. Fine.
19,	29.778	29.650	—	—	72.2	75.6	—	—	.527	.439	—	—	.69	.51	—	—	E. S. E.	E.	——	—	Cl'r am & fr. 9 pm. Det. c'lds no. to 4 pm
20,	29.582	29.538	29.561	29.5642	70.2	78.9	62.8	68.94	.583	.594	.493	.546	.81	.61	.88	.80	Calm.	S. E. by S.	Calm.	—	Clear and unclouded. Very fine.
21,	29.612	29.581	29.589	29.5884	69.6	74.9	67.6	69.90	.604	.557	.534	.543	.86	.66	.82	.77	Calm.	E.	Calm.	—	Generally clear am. Clear from 9 pm.
22,	29.597	29.537	29.508	29.5274	66.4	76.2	61.6	66.12	.568	.598	.492	.523	.90	.68	.92	.84	Calm.	S. E.	Calm.	—	Passing clouds. Aur. light 0 am.
23,	29.501	29.406	29.362	29.3905	66.4	79.0	68.4	72.11	.543	.533	.552	.553	.86	.55	.82	.73	Calm.	Calm.	Calm.	—	Generally overcast.
24,	29.310	29.319	29.460	29.3992	67.4	71.8	67.6	55.49	.593	.607	.576	.562	.91	.80	.88	.89	Calm.	N.N.W.	N.W.by N.	0.490	Quite cl'r to 8 am. Rem. part. clouded.
25,	29.608	29.643	29.678	29.6665	68.4	79.3	70.5	71.44	.501	.595	.437	.507	.74	.61	.60	.69	N. N. W.	W. N. W.	Calm.	0.450	Raining fr. 4 am to 1h 50m pm. Auroral light 9 to 11 pm.
26,	29.727	29.745	—	—	70.2	73.2	—	—	.547	.540	—	—	.69	.68	—	—	Calm.	Calm.	——	—	Clear to 9 am. Remainder clouded.
27,	29.793	29.750	29.707	29.7291	69.0	75.9	58.6	66.68	.574	.431	.383	.444	.84	.50	.79	.71	N.E. by E.	E S.E.	Calm.	—	Unclouded. Hazy. Very fine.
28,	29.644	29.544	29.515	29.5492	66.5	76.2	65.6	69.83	.523	.602	.577	.581	.83	.68	.94	.83	N. E.	S.E. by S.	Calm.	—	Unclouded. Hazy. Very fine.
29,	29.446	29.403	29.373	29.3850	74.4	81.6	74.8	75.88	.725	.755	.759	.731	.88	.73	.91	.85	Calm.	S. by W.	S. by W.	not ap	Part. cl'd. Sheet l'ning 10 & 11 pm.
30,	29.322	29.296	29.398	29.3615	75.7	85.4	72.5	75.38	.792	.699	.558	.649	.92	.59	.72	.76	S. S. W.	W. S. W.	N.W.	1.490	Thunder, lightning, & rain most of day.
31,	29.546	29.588	29.635	29.6063	66.0	77.8	64.0	68.39	.501	.432	.434	.450	.80	.47	.75	.68	Calm.	N. by E.	N. by W.	—	Ceased r'ng 0h 30m am. Day m'tly cl'd.
Mean	29.6067	29.5711	29.5853	29.5847	67.13	76.05	64.41	68 22	.544	.548	.492	.514	.83	.62	.82	.76				Cl'd to 9 am. Par. cl'd to 6 pm. Rem. cl'r	
																				2.895	*10th, noon—Thermometer stood at 94 deg. 1 pm had fallen to 77 deg. 6 min.

Highest Barometer, 30.027 at 7 a.m. on 17th.
Lowest do. 29.258 at 11 a.m. on 24th. } Range 0.769
Highest Temperature, 94°.6 on 10th, p.m.
Lowest do. .. 44°.5 on 17th, a.m. } Range 50.1
Mean Daily Range, .. 20°.85
Extreme Daily Range, 33° .1 from 13th, pm, to 14th, am.

Proportion of Wind from each Quarter—

N.W.	157	Total.	
S.W.	81	Winds,	369
S.E.	93	Calms,	279
N.E.	38		
		Obser.,	648

Mean force, 0.29 lbs; Max. force, 11 lbs, noon to 1 p.m., and at 6 p.m. on the 10th.

Temperature for July.

Year.	Mean.	Max.	Min.	Range.
1840,	66,3°	82,3°	47,0°	35,3°
1841,	65,5	89.0	39.9	49.1
1842,	64.7	91.0	42.5	48.5
1843,	64.58	86.8	38.7	48.1
1844,	66.08	86.6	40.1	46.5
1845,	66.74	95.0	45.7	49.3
1846,	68.22	91.6	44.5	50.1

Rain.		Wind.		
No. Days.	Inches.	No. Winds.	Calms	Mean force lbs.
6	5.270			
10	8.150	194	130	0.27
4	3.050	333	236	.33
8	4.605	358	266	.44
12	2.815	269	379	.19
7	2.195	328	320	.30
10	2.895	369	279	.29

Under the head of Tension of Vapour, is given the elastic force of the Aqueous Vapour in the Atmosphere at each Observation, in decimals of an inch of Mercury, or the proportion of the Barometric pressure due to its presence.
Under the head of Humidity of the Air, is given the proportion the Aqueous Vapour bears to the quantity the air is capable of sustaining at the existing temperature, saturation being represented by 1.00.
The Instruments are Standard Instruments. The Rain Gauge is 27 feet above the soil.—The Means entered are the Means by 24 hourly Observations, from 6, a.m., to 6, a.m.
The quantity of Rain or Snow received each 24 hours, is noted at 9, a.m.
The Observations entered in the column for 7 a.m., on Sundays, are actually taken at 9 a.m. The two Observations taken on Sundays are not included in any of the means.