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CANADA

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OF

MEDICAL AND SURGICAL SCIENCE.

EDITED BY

R. L. MACDONNELL, M. D., Surgeon to St. Patrick's Hospital, and Lecturer on Surgery, St. Lawrence School of Medicine, Montreal, &c., &c.

AND

A. H. DAVID, M. D., Physician to St. Patrick's Hospital, and Lecturer on Practice of Physic, St. Lawrence School of Medicine, Montreal, &c., &c.

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ORIGINAL COMMUNICATIONS.

ART. XII.—*On the use of Cod-Liver Oil Externally.* By. A. H. DAVID, M. D., Physician to St. Patrick's Hospital, Lecturer on Practice of Physic, St. Lawrence School of Medicine, Montreal,—Member of the Provincial Board of Examiners, &c.

"FEW remedies have of late been more extolled than cod-liver oil, and few, we may add, have caused so little disappointment as this valuable therapeutic agent. When it is considered how extensively it is used, it will be considered that it must be very effectual, since it is keeping its ground in a very remarkable manner, though employed in thousands of instances. According to all appearances, cod-liver oil is not one of those ephemeral remedies destined to shed a doubtful light for a very short time and be consigned to oblivion, but it is very likely to take rank in our pharmacopœia on the same footing as Quinine, Mercury, and Iodine."—*London Lancet.*

The above paragraph is used in allusion to the efficacy of cod-liver, oil in Phthisis, but the remarks I now intend offering are with the view of recommending it as a *local application* in various cutaneous affections, in which, after a trial of it in such cases for upwards of two years, I have found it to act almost specifically.

The first cases which I shall mention are those which are always of a very obstinate character, and which, before I used cod-liver as an application to them, I have often had to treat for months with every remedy that had been recommended and without success. I allude to Ringworm of the scalp, and having now used it in more than twenty cases, I can safely recommend it as a certain cure. It acts speedily, and some cases, that had resisted for weeks all other methods of treatment, were quite cured in four or five days. I have also used it in

Hospital practice, in cases of TineaCapitis, with equally successful results, and much to the surprise of many intelligent students, who closely watched the cases and witnessed with surprise the rapidly beneficial effects of it.

I have lately had an opportunity of trying it in a case of Psoriasis Inveterata, a disease which is allowed by all writers to be a very troublesome and intractable one, and the most obstinate of all the forms of scaly tetter. The patient had been suffering from it over three years, and had been under the care of several practitioners during that time, without deriving any benefit from the treatment employed by them. The greater part of his body was covered with the disease, as was also his neck, arms, and thighs. I immediately orderd him to apply cod-liver oil to the parts affected, and to keep them constantly covered with it, and in less than three weeks he was very much improved, most of the scabs had become dry and were falling off, and the skin underneath them assuming its natural colour. This man, being an in-door patient of the St. Patrick's Hospital, was repeatedly seen by many Medical friends, both civil and military, and was discharged completely cured in seven weeks.

In consequence of the success attending my use of it in these and various other cases of "Skin diseases," my friend, Dr. Arnoldi, was induced to try its effects in cases of extensive burns, and in these the cures might be said to be truly miraculous. In one, a man, who, when drunk, actually *roasted the whole of his back*, the constant application of cod-liver oil to it, produced cicatrisation in a very short time, without suppuration or any contraction; this case was also seen by several Medical men, as the patient was an inmate of the Montreal General Hospital, and they all agreed that it was a surprising case. Dr. A. has also frequently used it with equally good effects in cases of frost bites, and I may mention that I have used it in the same way in two cases of mild Erysipelas with similar beneficial results.

These remarks are not offered to the profession under the impression that there is anything particularly new in using cod-liver oil as an application in cutaneous affections, as I believe it has been occasionally used in this way for years. My only object is to call the attention of the profession to the very beneficial effects derived from the local application of so simple a means. I shall not attempt to explain the theory of its action further than by saying it presents all the properties of a "drying oil," and in some cases has produced considerable *burning heat* and intense pain in the parts to which it has been applied, and in one, that of Acne Rosacea, I was obliged to discontinue its use on the fourth day, from this very circumstance. And I entirely agree with Mr. Donovan's remarks as published in Rankin's Abstract, that "it is a most wonderful addition

to our materia medica, that it produces effects of which no other known remedy is capable, and that it is well worthy the attention of the Medical Profession."

ART. XIII.—*Fatal Case of Poisoning by Sulphuric Acid, with Observations*, by JAMES SEWELL, M. D., Physician to the Hotel Dieu, Quebec.

A SAD case, possessing more than usual interest, both from the poison selected, and the quantity swallowed, having recently occurred in my practice, I think it my duty to submit its history to the Profession.

Mrs. E., aged 23, the mother of two children, had about three weeks since suffered a miscarriage, which left her feeble and nervous. In this state, more easily acted upon by depressing causes, she heard a sermon, the effects of which on her mind (according to her own statement to me) she could not throw off; she fancied herself without the pale of salvation—her soul condemned and lost—in fact, she became insane with this predominant idea. In this state she remained, with some shades of variation, until Monday the 16th of February; her husband had been repeatedly warned that she would probably attempt to commit suicide, and he fortunately arrived in time to prevent her committing it by suspension on the Friday previous to the fatal accomplishment of her purpose. Her husband's business led him to the employment of Tincture of Bromine, Iodine, and other poisonous materials; these he had carefully disposed of beyond her reach. A day or two before the sad affair, he bought at a Druggist's one pound by weight of *concentrated sulphuric acid*, which shews about 5 fluid drachms to the oz.; he poured the whole of this into two large tumblers, dividing the quantity equally to form what these Artists call "a battery," by which they galvanize the silvered plates, previous to submitting them to the vapour of iodine in the production of daguerreotype likenesses; he had placed, as I have said, the Bromine and Iodine, &c., under lock, but, never suspecting the probability of her using this powerful acid for the purpose of self-destruction, he took no precaution with it. She was absent from her usual sitting apartment about 3 o'clock, P. M., of the 16th February, for somewhat less than two minutes, but she had time to effect her purpose, as she told him on returning to the room; on instant examination he found that she had emptied one of the tumblers of its contents, except about ½ a fluid oz., and the already excoriated state of her mouth and chin fearfully corroborated her story.

Assistance was quickly sought, and, on my arrival, finding that the stomach-pump had been imperfectly used, I re-introduced it. At this time

about 40 minutes had elapsed since the acid had been swallowed. I found her pale and perfectly collapsed, cold skin, no pulse at the wrists, and the action of the heart feeble and indistinct. The first effect of the poison had been to prostrate all the powers of life nearly to extinction. Milk and oil were first injected into the stomach and quickly withdrawn, but the appearance presented, destroyed all hope; it was dark, grumous-looking blood, mixed with a shred like filamentous substance. Oil, chalk, and carbonate of magnesia were freely used, with a view to neutralize the acid or blunt its action. Some re-action came on in about an hour, when her sufferings became dreadful to witness; she could scarcely be held in bed, her mind had cleared at once, and "she wondered what could have made her do it," and then "she was burning alive," were expressions incessantly uttered; she could, and did, swallow every thing that was offered to her, till delirium and coma closed the scene.

The body was carefully examined the next day, about 20 hours after death, and it is quite a hopeless task to give an adequate idea, by any description, of what we saw. The whole of the forepart of the stomach, that is, its greater curvature was destroyed, and fluid of the same appearance as that drawn up by the first action of the stomach pump, was on the surface of the intestines, and welled up from amongst their convolutions. The omentum was to a great extent in shreds, the back part of the stomach was likewise injured and look charred, but in a less degree, the food, (and she had dined heartily at noon,) was pushed toward, and lay at and near, the Pylorus. I apprehend, that the mass of food prevented the immediate contact of the acid, and thus accounted for its different state of disorganization; the great arch of the colon, where in contact with the stomach and omentum, was in some trifling degree affected. *The stomach was literally dissolved in Sulphuric Acid;* one or two drops from the scalpel fell upon some linen, and a hole, through which the finger could be thrust, was quickly made, showing how active this powerful acid still was. Doubtless the acid had continued to destroy the texture of all parts it came in contact with. Even after death, but much of the disorganization, that we witnessed, had been effected by this destructive agent in the three hours that intervened between the time of her swallowing it, 3 P. M., and 6 P. M. the hour she died.

It is pretty evident, that no plan of treatment could have been adopted in this sad case with any chance of success, either with a view to withdraw the acid before it had time to work irreparable injury, or to neutralize it. There was a well marked excoriation at each angle of the mouth and beneath the chin, much more apparent after death. The inside of the mouth and lips were of a dead white, as if burnt by a hot iron.

It would have been interesting to have examined the fauces œspohagus, &c., but it could not be done. I am indebted to Drs. Boswell and Painchaud for their assistance upon this sad occasion.

ART. XIV.—*Observations sur un cas d'infanticide*, par le DOCTEUR BOYER, Professeur de Médecine Légale dans l'Ecole de Médecine de Montréal, Médecin de l'Hôtel-Dieu, etc., devant la cour du Coroner.

LE 20 mars, je me rendis, à l'invitation de M. le Coroner Coursol pour assister à une enquête, au village de Varennes, qui devait se faire sur le corps d'un enfant nouveau-né.—C.. V.., sauvagesse de naissance et veuve depuis deux ans était accouchée le lundi précédent, le 15 mars, d'un enfant mâle.

Voici les renseignements fournis par les différents témoins :—Mad. L. chez qui elle demeurait, dépose, que dans l'après-midi de lundi, étant allée chez sa voisine, sa petite fille agée de 10 ans vint la chercher peu de temps après et lui dit, d'un air effrayé, " venez, vite ma tante Catherine se plaint beaucoup et j'ai entendu les cris d'un enfant dans sa chambre" aussitôt elle s'y rendit avec la voisine, elle trouva la femme debout auprès de son lit, et vit des traces de sang sur le plancher. Lui ayant demandé où était son enfant, elle répondit qu'il était mort en tombant par terre et qu'elle l'avait mis sous la paillasse. La voisine étant allée au lieu indiqué trouva en effet l'enfant mort, avec le placenta et le cordon ombilical non séparés. Elle dit avoir coupé, elle-même, le cordon avec des ciseaux.

Après l'autopsie les médecins donnèrent leur témoignage verbal et rédigèrent ensuite le rapport suivant à la demande du Coroner:—

Nous, soussignés, Médecins, résidants au village de Varennes, District de Montréal, sur la réquisition de Charles Coursol, Ecuier, Coroner, nous sommes transportés, aujourd'hui le 20 mars 1852, à la salle publique de la maison de la Fabrique, dans le dit Village, pour examiner le corps d'un enfant, né il y a cinq jours, de Catherine Vassal, veuve de Xavier Fougire dit Champagne.

Après avoir prêté serment entre les mains du susdit Coroner, nous avons, conjointement avec le Docteur Wilbrenner, Ecuier, M. D., demeurant au Village de Boucherville et en présence du Docteur Boyer, Ecuier M. D., de Montréal, procédé à l'examen du corps du dit enfant.

Il nous a été présenté dans un bière et enveloppé de linges.

Il est exempt de putréfaction et de fétidité. La peau est en plusieurs endroits congelée par le froid.

Il est du sexe masculin, a des cheveux noirs et abondants, sa longueur du sommet de la tête aux talons, est de 19 pouces. Les ongles sont

bien formés et dépassent l'extrémité des doigts. Il est gros, doué d'embonpoint et bien conformé.

Il est encore enduit de la matière grasse onctueuse et blanchâtre que presque tous les enfants apportent en naissant, et d'un peu de meconium aux membres inférieurs et au ventre.

Le cordon ombilical, coupé par un instrument tranchant, a la longueur de quatre pouces environ de l'ombilique, n'est pas ligaturé.

Il n'y a sur ce cadavre aucune marque de violence extérieure. La surface en est de couleur rose plus ou moins pale, excepté à l'occiput, à la nuque, aux dos, aux lombes et aux fesses, où nous voyons des ecchymoses ou plaques de couleur rouge violacé, irrégulières, entre-croisées ça et là de quelques lignes blanchâtres ; mais à l'exception de celle de la région occipitale, ces ecchymoses sont superficielles et ne s'étendent pas au delà du tissu cellulaire : ce dont nous nous sommes assurés par la dissection et ce qui nous a convaincu qu'elles ne sont dues qu'à la stase du sang, dans les parties désignées, sur lesquelles le cadavre est resté couché immédiatement après la mort.

Les ongles, la place interne des mains et la bouche sont de couleur bleu foncé.

La dissection des téguments du crane fait connaître, sur le parital droit et à la fontanelle postérieure, un épanchement de sang fluide et noir d'environ un pouce et demi de surface. Le cuir chevelu est infiltré du même liquide, surtout à sa face interne, dans la même étendue et à la partie postérieure de la tête.

A l'intérieur du crane, dans les membranes du cerveau, il y a épanchement de même sang dans les parties correspondantes à la même fontanelle et à la région occipitale.

Les os du crane ne sont pas fracturés. Les vaisseaux à la surface du cerveau paraissent fortement injectés d'un sang noir.

Les poumons, le cœur et le thymus, plongés en masse dans l'eau, surnagent. Les poumons sont d'un rouge foncé sans aucune trace de putréfaction, leurs vaisseaux sanguins ont le même aspect que ceux du cerveau. Des fragments de ces organes fortement pressés entre les doigts surnagent toujours.

La cavité droite du cœur (ventricule droit) contient du sang noir et liquide, la gauche est vide.

Le foie est gorgé de sang noir et liquide.

Le gros intestin est distendu par le méconium.

La vessie ne contient pas d'urine

Conclusion.

De ce qui précède nous concluons.

1°. L'enfant que nous avons examiné est du sexe masculin.

2°. Il était à terme.

3°. Il a respiré, il a vécu.

4°. Il était viable.

5°. La coloration du tronc, de la bouche et des mains, l'état de congestion sanguine des viscères, notamment des poumons, du cerveau et du foie, sont autant de signes qui établissent que la mort a été le résultat de l'asphyxie par suffocation.

6°. La présence d'épanchements de sang sous les téguments du crane et dans les membranes du cerveau, prouve que l'enfant était vivant quand il a reçu les contusions qui ont produit ces épanchements.

7°. Ces épanchements ne sont pas assez considérables pour produire une mort instantanée.

En foi de quoi nous avons dressé le présent rapport que nous certifions en tout conforme à la vérité et aux principes de l'art.

Fait à Varennes, le 20 de mars 1852.

R. WILBRENNER M. D.
CHS. FRS. PAINCHAUD Médecin,

Après l'audition des témoins le coroner récapitula les témoignages et expliqua habilement les devoirs du jury. Il termina en disant qu'il y avait deux chefs d'accusation, l'un pour meurtre et l'autre pour recèlement de naissance. Après délibération le jury rendit le verdict suivant: *mort par accident.*

Le 23 mars, le coroner remit les dépositions des témoins à l'officier de la couronne, pendant le terme de la Cour criminelle, afin qu'elles fussent soumises au grand jury. L'accusation ne fut pas approuvée par ce corps et en conséquence il ne fut pas trouvé "*Bill*" contre Cath. V.

ART. XV.—*Observations on the Sanatory Institutions of the Hebrews as bearing upon Modern Sanatory Regulations.* By the Rev. ABRAHAM DE SOLA, Lecturer on Hebrew Language and Literature in the University of M'Gill College, &c.

ONE of the strangest of all moral phenomena in the present day is, perhaps, presented in the comparatively trifling, nay, almost imperceptible, effects which the experience and teachings of ages have had in the legislative enactments and individual efforts of modern nations with reference to the all-important subject of health. Strange also is the fact, that although the principle of self-preservation, even in itself, shou'd naturally incite communities, as well as individuals, to endeavour to profit by, and to act upon, teachings, always plentifully attainable, if duly sought, yet, by a most culpable negligence and apathy, more especially visible in large cities, have miasma and plague, malaria and consumption, been

permitted to generate, and death to run riot, amongst those, who, but for the carelessness and cupidity of their fellow-men, might have attained an age almost reaching that of the patriarchs of old. Such procedure must not only be highly condemnable in the eyes of man, but necessarily sinful in the sight of God. For, as is his wont, the all-merciful and all-wise Creator has not left us without guidance in a matter which, next to the due care and health of our souls, it is most necessary for us to know. Thus, it never has been, as indeed it never can be, questioned, that the most ancient and, at the same time, most sacred treatises on the subject of a national and individual hygiene—the legislation of Moses son of Amram—contains the wisest and most valuable principles, recommendations, and enactments on the subject of health, which, though thousands of years have elapsed since their enunciation, do yet remain like "all which proceedeth out of the mouth of the Eternal," just as valuable and just as wise as when first revealed for the edification of the Hebrew people, and are, therefore, now, as then, fully worthy our most attentive and reverent consideration.

Among the Hebrews, who, under God, have preserved these enactments to the present day, it has ever been a golden maxim, "there are no riches can compare with health;"* and this principle is equally developed in their Post Biblical, as well as in their Biblical, jurisprudence, as it will be our endeavour to show in the following pages. The maxim appears also to have been in no small degree appreciated and acted upon by the ancient heathen nations, for, as we all know, their legislators not only passed laws calculated to secure an athletic, healthy race of men, who would best serve their respective states, but also for the healthfulness of these states themselves; and their orators and poets, as is also well-known, frequently called the attention of the people to the subject, in order that, being reminded in the words of Virgil,

> Noctes atque dies patet atri janua Ditis,
> Sed revocare gradum, superasque evadere ad auras,
> Hoc opus, hic labor est.†

they might thereby accord an universal and cheerful obedience to the laws. And even with respect to Christian nations, it is a question which, we think, cannot be so immediately decided in the affirmative, whether, in the first century of Christianity, they were less appreciative than their descendants are, in the nineteenth, of the truth conveyed in the saying of the old English moralists, that "there is but one way of coming into

* אין עושר כבריאות · מבחר הפנינים

†Æneid lib. vi. (127) Thus rendered by Davidson, "Grim Pluto's gate stands open night and day; but to re-ascend from thence to the upper regions, this is a work, this a task indeed."

the world, but a thousand to go out of it," or whether they could parallel the atrocities which are daily revealed to us with reference to the impurity and adulteration of food, the state of city grave-yards, the noxious manufacturing processes carried on in densely populated neighbourhoods, and a thousand other evils calculated to undermine the public health. These, however, are questions we do not attempt to decide, but, leaving them for the consideration of others more competent to do so, we proceed to examine that branch of the general topic which we have selected as our own, and will endeavour to show what are the ideas and practice of that people to whom a code of sanatory laws was first revealed.

But it is proper to premise, that the Sanatory Institutions of the Hebrews are not to be looked for in the Bible only, though the grand principles, upon which they are based, have undoubtedly been borrowed by them from, and credited by them to, the sacred volume. It is to that vast repertory of the national traditions, that well-known, but little understood, compilation, the Talmud, and to their later casuists, that we must turn, would we find and correctly estimate the multifarious, important, and highly interesting sanatory constitutions of a people who honoured these constitutions with a most scrupulous observance, not merely because they regarded them as mere matters of expediency, utility, or profit, but as the strict, unavoidable, and uncompromising requirements of their heaven-born religion. The pains and penalties following derilection or neglect—in some cases amounting even to excision—also tended, both in Biblical and Post Biblical times, to secure from the Hebrews a scrupulous observance of their sanatory laws. We are well aware, that some few, writing in an unfriendly spirit of the book in which they are contained, have condemned them as overloading man with useless ceremonies, which enter into every hour of his existence and make him the mere creature of ablutions and precautions. But it is very evident, that this objection must be pronounced quite futile, until it can be shown that a careful and strict attention to the promotion of health is at all condemnable, pernicious or unwise. By another class a further objection has been made to them, that, although their tendency may be good, yet is the minuteness of detail employed in the books of Hebrew jurisprudence highly objectionable, and not to be tolerated in the present refined state of society. But here it is also evident, that such an objection is utterly groundless, and could only be adduced but for a sinister purpose. For if they become objectionable and intolerable on this account, then equally objectionable and intolerable must we pronounce every medical book, tract, or treatise, from the days of Galen downwards, since it needs no very extensive knowledge of both classes of authors to

decide that the former are clearly and indisputably more measured in their *modus scribendi* than the latter, notwithstanding which but few would recommend the suppression of valuable medical treatises on this account. The truth is, that, equally with any modern casuistic or scientific writers, the Jewish Doctors or Rabbis wrote for intelligent, considerate, truth-seeking men. They wrote neither for children, for fools, nor for blind zealots. And when they entered into details designed to promote the bodily, and consequently the mental, health of their people, they knew that they addressed men who would only consider themselves "a wise and discerning people" accordingly as they respected the "statutes and judgments so righteous," upon which their teachers amplified—men, who, whatever their faults otherwise, could yet duly appreciate recommendations to purity, chastity, and sobriety, and could not only ostensibly, but actually and in reality, act up to them, —men, whose cheeks would not mantle with the deceitful hues of a false modesty when particularization of wholesome, sanatory and moral laws were addressed to them in public, while, in private, they would, with brazen brow and unblushing face, outrage every one of these laws, and yet loudly proclaim a refined state of society, as, perhaps, is but too much the case in our day. And that the Hebrew Sanatory Institutions, despite their minuteness of detail, have proved to the nation neither hurtful to body nor baneful to mind, is, we think, evident from various considerations. In the first place, although there now flows in the veins of the Hebrews the blood of the most ancient nation remaining on earth—the same blood which once animated Abraham, Moses, David, and Isaiah,—although the stake has destroyed of them its thousands, and the sword its tens of thousands—although monarchs and legislators, from the days of Pharaoh downwards, have passed enactments for their extermination, forbidding, as is the case even in the present day, their obedience to one of the first laws of nature*—although found in every country and clime, amidst the snows and ice of a northern, and the burning sun of a southern, latitude,—and although, at all periods of their history, subject to a thousand adverse and destructive influences, yet do they remain a wondrous living problem, the same *undeteriorated*, indestructible race, with the same characteristics everywhere traceable among them, with an eye not less bright than when it was called to witness the lightnings of Sinai's mount, and with a step not less elastic than when it repaired to the Holy Temple which God vouchsafed to make the place of His especial residence; in short, with the same favourable, energetic, and high organization among the men, and with the same instances of rare attractive beauty among the

* In many parts of northern Europe the laws of the State permit only a certain number of Jews to marry.

women. Nor do we find them, in consequence of their sanatory regulations, more subject to diseases, or obnoxious to epidemics of all descriptions, but the contrary; for it is undeniable that the mass of the nation, who are duly observant of their dietary laws, are remarkably free from certain classes of diseases, particularly those of the skin and the hypochondriac regions; while, ever since attention has been given to the statistics of epidemics, both in Europe and America, it has been announced as an extraordinary fact, especially during the ravages of Asiatic cholera, that proportionably, the Jewish community have remained in a remarkable degree unscathed under these awful visitations.*

These laws, too, have evidently not unfavourably affected their moral organization, for, let us search the calendar of crime of every country, and we shall be led to the conclusion that these same dietary and sanatary laws have had the effect of exempting them in a remarkable degree from that, to speak technically, plus-animalism or preponderance of the animal organs and instincts, which has led in others to the commission of the most awful crimes. In vain we seek their names in the long list of those convicted of inveterate drunkenness, of midnight plundering and assassination, of fœticide, infanticide, of murder, and of other revolting and abominable crimes, which one dares not even think of or allude to. Of the correctness of this assertion it is easy to adduce evidence, but upon those who may feel disposed to doubt it, rests, as we imagine, the burden of proof to the contrary. It would appear also that these laws have not had the effect of investing them with an inferior mental organization, for the attentive reader of history and observer of events, cannot but remain astonished at the immense, wondrous, influence they have exercised, and do even yet exercise upon the destinies of the world,†—in the present day,

* During the fatal prevalence of Cholera in London, in 1849, the editor of a leading paper thus writes: "It is a singular circumstance, that throughout the late awful visitation, so few, if any Jews, died of the Cholera in London, *although the majority of them reside in districts where it committed great ravages.*" See also Thanksgiving Sermon of the Rev. D. A. De Sola, of London, for 15th November, 1849. We believe that the authenticated cases did not exceed two, and one of these, personally known to us, was a gentleman of opulent circumstances, at Brighton, where he had gone for the advantages of sea-air.

† Although we might adduce abundant proof of the correctness of this statement also, yet do we attempt to satisfy our readers and ourself by simply quoting from one of the productions of the present Chancellor of England. Mr. D'Israeli, in his Coningsby, thus writes: "The Saracen kingdoms were established. That fair and unrivalled civilization arose which preserved for Europe arts and letters, when Christendom was plunged in darkness. * * * * * During these halcyon centuries, it is difficult to distinguish the follower of Moses from the votary of Mahomet. Both alike of equally built palaces, gardens, and fountains; filled equally the highest offices of the State; contested in an extensive and enlightened commerce; and rivalled each other in renowned universities." Sidonia, as a type, "was lord and master of the money market of the world, and of course virtually lord and master of everything else, and monarchs and ministers of all countries courted his advice, and were guided by his suggestions." * * * * * * * "He had visited and examined the Hebrew communities of the world, * * * * * and perceived

more especially in the commercial and political world, though their influence and importance, religiously, as the ancient, preserved, and living witnesses of the Sinaic revelation, is by no means to be underrated. On this subject, however, it is not our province to dwell here, but we hasten to assure our readers that, in all we have said, we have not sought to assert that it is to their Sanatory Institution solely, that the Hebrews owe their preservation as a people. Far from this. In common with all believers in the Sacred volume, whether Christians or Jews, we witness the existence and preservation of Abraham's sons, and exclaim "the hand of the Eternal hath done this thing." Yes, we behold in it but the fulfilment of the predictions of their own lawgiver and prophets, the fulfilment of God's threats and promises to them. But in common with those believers, we are also impressed with the conviction that God frequently permits us to perceive and appreciate the means whereby He works out the end He proposes:—that He as frequently prefers simple and natural means for the accomplishment of His behests, and that it is therefore quite permissible, after due inquiry to maintain, that the Sanatory Institutions of the Hebrews, have, under God, tended in a great measure to secure the present preserved and undeteriorated existence of the nation. To what extent they have done so it will of course be for the reader hereafter to decide. Believing, as we have already affirmed, that it is to a very great and important extent, we think no fur-

that the intellectual development was unimpaired." * * * * * "And at this moment, in spite of centuries, and tens of centuries of degradation, the Jewish mind exercises a vast influence on the affairs of Europe. I speak not of their laws which you still obey; of the literature with which your minds are saturated; but of the living Hebrew intellect. You never observe a great intellectual movement in Europe in which the Jews do not greatly participate." Mr. D'Israeli then, at length, shews how mighty revolutions are "entirely developed under the auspices of Jews," and mentions, as Jews, those who are or were professing Christians—at excelling in theology, Neander, Benary, Wehl; in diplomacy, Arnim, Cancrin, Mendizabel; in war, Soult, Massena. "What are all the schoolmen, Aquinas himself, to Maimonides; and as for modern philosophy, all springs from Spinoza." In music, "the catalogue is too vast to enumerate; enough for us that the three great creative minds, to whose exquisite inventions all nations at this moment yield—Rossini, Meyerbeer and Mendelsohn—are of Hebrew race." Pastar and Grisi also! We cannot deny ourself the pleasure of quoting also from a lecture on the "Unity of the Races," delivered by our learned and esteemed friend, T. S. Hunt, Esq., of the Canada Geological Survey, as further evidencing the fact under notice, and as an excellent resumé of the above.

Mr. Hunt says: "We see the Children of Israel scattered over the face of the earth since eighteen centuries, without a country, yet finding a home in all; scorned and trampled upon, yet often the power behind the throne directing the destinies of kings; poor and abject, yet holding the golden keys of war and peace in Europe; excelling in philosophy and in theology, in music and in art, in war and in statesmanship; despised, yet ever powerful; counted as aliens, yet, with their genealogies of forty centuries, looking down with scorn upon the aristocracy of Europe, which is but as of yesterday, when compared with their own proud lineage. The Hebrew people still preserves all its natural characteristics, and stands proud and imperishable before us to-day, the representative of the earliest ages of the world's history, and the evidence of the undying vigor of the pure Caucasian race."

ther introduction or apology necessary, ere we introduce them, as we proceed now to do, to these Sanatory laws and constitutions themselves.

To be continued.

ART. XVI.—*Medical Statistics of Prisons.* By A. Von Iffland, M. D., M. R. C. S., &c.

The word Statistics, now so familiarly used by every one, was first employed, about the middle of the last century, by a professor, of Gottingen, to express a summary view of the Physical, Moral, and Political condition of States. Many important facts relating to this branch of knowledge had been published long before this learned appellation was applied to them; and many valuable essays, on the condition as regards the health of various countries, cities, towns, and hospitals, have been given to the world, without the authors of these insulated reports, dreaming that they were laying up materials for the important science of *Medical Statistics—a science, which, by demonstrating the existence of evils, may lead to a removal of their causes, and serve as a test by which to determine the success or inefficacy of the measures resorted to for that purpose.*

A mere register of occurrences, however, which does not tend to establish some general principle, is dull and valueless. Statistics should embrace a comparison between the value of life in ancient and modern times—progressive changes, and present state of mortality in this country—salubrity—Medical Statistics of the cities—of hospitals—of asylums for the insane—mortality of prisons—of the increase and decrease of disease—of climate—influence of various conditions, professions, and modes of life, on longevity—average quantity of disease attendant on particular pursuits—statistics of the sexes, &c., &c.

For upwards of thirty years, the principal Governments of Europe have paid much attention to statistics; and we possess very instructive returns from nearly all the counties, cities, hospitals, and prisons, on the continent. The public good appears to call for the regular publication, on an uniform plan, of the statistics of all our public Institutions, so liable to neglect and abuse as are many of them. For, independent of throwing much important light on the economy of different establishments—which cannot fail to be of great interest and utility—it is statistics alone which can give accuracy to our knowledge, and that confidence in our inferences, which nothing but the careful collection and analysis of facts can rightly confer.

It is not within my knowledge, nor is it, I believe, within that of others older than myself, that any attention has been paid to the hygiene of

our prisons; it is a subject, however, upon which, since some time past, I have been anxious to devote a few hours, apart from the exigencies of that most arduous, laborious, ill-requited and most unpleasant of practices,—*country practices;* but, in doing so, I pray a full acquittal of all intentions of trenching upon the official duties of those entrusted with the health of our prisons.

It has been justly observed, that it is highly improbable that imprisonment will ever tend to lengthen life, however carefully the physical condition of the prisoners may be attended to. The depressing emotions, inseparable from a state of confinement, will be continually in antagonism to every physical advantage which may be brought to bear on the prisoner's condition, and, therefore, no doubt can exist, but that the essential character of imprisonments tends to the development of disease, but more particularly of a tubercular class. We must not omit also, the routine life as a second and important condition, distinguishing the prisoner from the free man, and which also exerts an injurious influence on the frame.

Though it may be difficult to prove the assertion, still few will be inclined to deny that the above essential characters of imprisonment tend to the development of tubercular disease; and it may, perhaps, hereafter be shown, that even in a prison, whose inmates may not suffer in this respect more than the general population, the result has been brought about only by the physical advantages counterbalancing the depressive influences sufficiently to preserve an average amount of health.

We ought not, however, to overlook the fact, that tubercular disease is produced among persons at liberty by exactly those conditions which have prevailed in prisons, viz.: cold, damp, bad ventilation and diet. From this fact, then, we cannot justly reach the conclusion that imprisonment necessarily produces the disease; for so far as all records are concerned, with few exceptions, we have disease noted for which a true and sufficient cause may be traced, and one not necessarily connected with imprisonment. That tubercular disease has, however, always been considered one of the chief evils produced by confinement in prisons; we have the authorities of those, whose opinions are based upon long practical experience and observation, and which appear to be confirmed in a remarkable degree by the facts recorded during the experiment which has been made in large prisons.

From these facts, it becomes a matter of very great importance to direct our inquiries as to the time when prisoners are, or may be, injuriously affected in relation to the periods of imprisonment. With the view of influencing these enquiries, I have already submitted a few

observations to Dr. Wolfred Nelson, long holding a pre-eminent position in our noble profession, and upon whom, to the most unqualified satisfaction of the Province at large, the Government has judiciously conferred the important and responsible office of Inspector to the Provincial Penitentiary, and I have every reason to believe, that the subject, involving, as it does, the interests of science and humanity—interests, to which his whole useful life has been subservient—will share his multifarious engagements.

The statistics of prisons, published up to the year 1847, if not entirely conclusive, furnish strong grounds for the general impression which exists among those who have given particular attention to the subject, that the injurious effects of discipline fall more heavily on those prisoners who are confined for *lengthened periods*, than for *short periods;* and that the third period of *six months is especially fatal*, either in its immediate or prospective consequences.

Dr. Baly, whose observations are based on the extensive experience of a very acute observer, in his statistics, remarks:—"In this Milbank Penitentiary, and also in the Prisons of France, the mortality has been greater amoug the prisoners who were undergoing their second, third or fourth year of imprisonment, than amongst those who had been longer in confinement; *so that it would seem as if prisoners, who were of feeble constitution, or predisposed to disease generally, fall victims to the injurious influence before the end of the fourth year of their confinement, whilst those, who were able to support their punishment until that period without serious deterioration to their health, seem proof against the causes of disease to which they were exposed.*"

Dr. Baly states his opinion, that the cause of scrofula and consumption, being developed by imprisonment, is a *deficiency* in *free, active, voluntary exercise, the state of mind, cold*, and *want of ventilation*—that he did not consider the site of the Penitentiary had any influence in producing consumption—that if prisoners had only been confined at Milbank three months, it would have been the most healthy prison in England—and that a great increase of disease takes place in the third period of six months; and also that this would hold good in any prison, *though, if all the causes referred to were less active, the development of disease might be at a later period.*

As regards several of the best conducted prisons in England and France, we have the most unquestionable evidence, that the third six months of confinement has been an especially fatal period, and the same rule holds good to a certain extent in the United States—for instance, at the large Penitentiary at Philadelphia.

We have here, as yet, it is true, no authentic data, by which we might

estimate the physical effect resulting from lengthened imprisonment, or other noxious causes; nor have we, indeed, any record or published report of any particular system of discipline or administrative economy specially established in our prisons, save those but recently, and doubtless judiciously, enforced in the Provincial Penitentiary by those invested with its executive control and surveillance. It is, however, to be hoped that, ere long, the powers of the Inspectors will be extended, and made to include all our penal and other public institutions. It is not my intention to disturb the quiet repose of those, from whom some enlightenment upon this interesting subject might very reasonably be expected, but a question, of so high an importance as that, bearing upon the mortality and physical effect resulting from any particular system of prison discipline and management, is one in which the parliament and public are deeply concerned, whatever Physicians to Gaols may affect to overlook. For if, in enforcing any system of discipline, it be found that the chances of life are diminished in any great proportion, every effort should be made (consistent with the infliction of such a punishment as is calculated to deter from crime) to reduce those chances to a minimum. "Under any form of discipline," says the late Mr. Crawford (a gentleman, whose name is an authority on prison discipline,) "there will be almost as great an *inequality* in the absolute amount of punishment endured, as there is variety in the constitution and circumstances of the individuals who are subject to it. But in no point is this defect of imprisonment so formidable and so deserving of the utmost attention as when it affects the *health* of a prisoner."

The physical condition of one man may be improved by the same discipline that consigns another to the grave. Every consideration, therefore, of justice and humanity would dictate, that where there was a remedy calculated to avert the evil, it should be applied.

Hitherto the effect of imprisonment on the *lives* of prisoners has not attracted the attention which is due to its importance. Capital punishment, as formerly inflicted, has been justly denounced, but the loss of *life*, incidental to imprisonment, *from causes which were remediable*, though noticed in official Reports, appears to have escaped the watchfulness of the public. Nor has the effect of imprisonment on mortality, so far as I am aware, ever been prominently set forth, so as to add to the deterring effect of a sentence on the criminal population generally. It has, therefore, been a sacrifice of life, without any corresponding object gained by it. On reference to several returns on the mortality of prisons, we have the important facts clearly established, that imprisonment for long periods produced every where a high rate of mortality, and that although, in particular instances, other causes might

contribute to increase the number of deaths, yet, in all prisons, the increased mortality was chiefly due to the prevalence of *one and the same disease*, viz.: *tubercular scrofula*. Further, that the most influential causes of mortality from *tubercular diseases*, appear to be, as already stated—1st, deficient ventilation; 2d, cold; 3d, poorness of diet; 4th, want of active, bodily exercise; 5th, a *listless*, if not dejected, state of mind.

With respect to ventilation, temperature, and diet, these essentials are, or may be, secured to any extent that is conducive to health, which limits the inquiry to the means of obtaining more *active, bodily exercise*, and more *varied occupations*, or excitement, in order to relieve the minds of prisoners from *listlessness and defection*.

The same subject is referred to in another paper by Dr. Baly, in which the following observations are made respecting the effects produced in arresting the progress of disease by the removal of depressing influences: "Although there may not be much absolute despondency or remorse among the prisoners, yet there was a state of mind not less injurious, I mean a *listless* and *torpid condition*, an absence of all *cheerful* or *varied thought*, attended, in most cases, by an uneasy and anxious sense of restraint, and desire of liberty. The influence, which this state of mind had excited, became most apparent when it was suddenly removed.

"Prisoners, who were in an advanced stage of consumptive disease, and who, in the infirmary, had been gradually and rapidly getting worse, immediately improved on being released from confinement. And, in many instances, I have observed this improvement in their symptoms to commence as soon as the fact of their being recommended for pardon was communicated to them, which sometimes happened two or three weeks before their discharge."

He goes on to say, that the check given to the disease was generally not temporary, that he has seen prisoners, who, on discharge, laboured under fully developed Phthisis, who were perfectly restored to health, not exhibiting any physical sign of structural change.

Improvements in diet, together with the ameliorations in the Sanatory conditions of prisons, have, of late years, been strongly recommended to the local authorities in England, the United States, and France, and from official reports, which have been kindly placed at my disposal, I learn, that, where they have given effect to these recommendations in the principal prisons, the mortality has been reduced one half, and without in the least diminishing the punishment due to crime.

In corroboration of what I have advanced, that imprisonment for long periods produced a high rate of mortality, I shall here subjoin Returns,

showing the progressive increase of Deaths and Pardons with increase of periods, calculated on 1000 prisoners.

Deaths and Pardons at Milbank Penitentiary.	Ratio of Deaths and Pardons, per 1000 per Annum.
First 3 Months,	01.1
Second 3 Months,	18.4
Second 6 Months, completing 1 year,	25.1
Third 6 Months. The most important period of imprisonment, completing 18 Months,	54.7
Fourth 6 Months, completing 2 years,	65.5

Deaths and Pardons from Consumption at Milbank.	Ratio of Deaths and Pardons per 1000 per Annum.
During the 1st. three Months,	0.
During the 2d. three Months,	2.3
During the 2d. six Months, completing 1 year,	12.8
During the 3d. six Months,	29.6
During the 4th six Months	33.1

At the Eastern Penitentiary at Philadelphia, in which the average period of imprisonment is two years, the mortality of Convicts at different periods of imprisonment, is as follows:—

	Ratio per 1000 per Annum.
During the 1st three Months,	19.57
During the 1st. year,	26.26
During the 2d. year,	47.61
During the 3d. year,	66.97
During the 4th. and 5th. year	43.14

ART. XVII.—*Case of Expulsion of the Fœtus at full time with the Membranes Entire.* By R. W. Evans, M. D., Richmond, C. W.

On the twenty-sixth day of April, 1851, I was called to attend a delicate woman, aged 40, in labour of her ninth child.

I was informed by a loquacious midwife extremely ignorant, that she had walked the patient about and done all she could for the last three days, and all to no effect, and that she feared all was not right.

I ordered the patient to be put to bed, and administered a few drops of the water of Ammonia. The progress of the labour became more active, the pains constant, and a moderate discharge of liquor Amnii; in about five minutes, the Fœtus was expelled immediately afterwards entire, much to the astonishment of the midwife and her relations. The membranes were opaque and preternaturally thick. I opened the membranes with a pair of scissors, and put the child into a warm bath without detaching the placenta. I tried all the ordinary methods to recover

the child, but to no purpose. The patient enjoyed a good night's rest by the help of an anodyne, and recovered in about eight days.

It is obvious, that the cause of the labour in the above case, being tedious, was the preternatural strength of the membranes, and that labour might have been hastened by rupturing them.

Cases of this kind are rarely met with in practice, particularly at the full period of utero gestation.

ART. XVIII.—*Case of Fracture of the Skull, with loss of portions of the Brain, followed by complete recovery.* By F. S. VERITY, M. D., Hemmingford.

To the Editors of the Canada Medical Journal.

GENTLEMEN,—In your number for April, there is reported an interesting case of "*Fracture of the skull with loss of a portion of the substance of the brain*," accompanied by some observations thereon by Dr. Butler. The Doctor, in his observations on the case, after mentioning the Vermont case, says: "he has not succeeded in finding the report of but one other case (that of Dr. Snyder, of Va.,) of injury to the brain, with a loss of a portion of its substance, followed by recovery." From this I infer, that the Doctor believes recovery to be very rare under such circumstances. I myself, within the last four years, have had one case of *fracture of the skull and loss of a portion of the brain*. The patient's name was David Cummings, aged 14 years. While teazing a horse, he was kicked on the side of the head and sent to the ground senseless. I arrived at the scene of the accident within one hour from the time of its occurrence. On examination, I found, as in Dr. Fitch's case, "a fracture of the skull between the right parietal and temporal bones." On the external surface of the wound, which had bled very freely before my arrival, there were small portions of bone and brain mixed together in a clot of blood; upon removing these, I saw a portion of bone completely detached from the skull and imbedded in the brain; with a forceps I cautiously took it away; a little blood flowed, which brought away several portions of brain, the largest of which was about the size of a hazel nut; this piece of bone was about an inch long. With a probe I carefully felt for any spiculæ of bone which might be remaining, and, after a minute search, I discovered an irregular, jagged piece, about half an inch long, nearly buried in the substance of the brain, which was removed together with every spicula of bone I could find. The patient, during this time, was perfectly comatose, pulse 60, countenance pale, and the breathing heavy; he manifested no sensitive-

ness when the bone was removed from the brain. I dressed the wound and laid over it a cloth dipped in tepid water, and then left him.

I returned in two hours; he was still comatose, but had ejected the contents of his stomach.

As my object is not to detail the treatment, I shall merely add, that extreme re-action took place in twenty-four hours, which was successfully combatted by cold applications to the head, and by brisk purgatives. In two days, sensation returned; at the end of a week he was perfectly conscious, and in a month was well, and has not been inconvenienced by it to this day.

I should have stated that portions of the brain came away at the first three dressings.

As I do not pretend there is anything novel in this case to take it out of the ordinary routine of practice, I send it merely to show that recovery, under the circumstances mentioned by Dr. Butler, is, perhaps, more common than he believes, and I have no doubt that many Surgeons could supply similar and more interesting cases if they would be at the trouble of reporting them.

I remain, gentlemen,

Your obdt. servant,

F. S. VERITY.

SCIENTIFIC INTELLIGENCE.

SURGERY.

NOTE.—WE are delighted to see, from the many admirable reports recently published by our old friend, Mr. Butcher, that he, at least, is determined to keep up the high reputation which the Dublin Hospitals formerly possessed for Practical Surgery and Medicine. It is in no unfriendly spirit, but in one of deep regret, that we must express our opinion that, in the "rising generation" of surgeons and physicians, the "Dublin School" has not given evidence of possessing men determined to maintain the character established for it years ago, by the exertions and observations of Colles, Crampton, Cusack, Carmichael, Graves, Jacob, Stokes, Corrigan, Adams, Harrison, Kirby, Smith, and several others. In midwifery and ophthalmic surgery, we allow that, in the present day, we see many worthy to take the place of their predecessors, and, in these departments, an exemplary display of zeal and industry has of late been exhibited; but we repeat that, in pure surgery and medicine, with the exception of the invaluable introduction of compression in the

treatment of Aneurisms, the Dublin Hospitals have not furnished their proportion to the scientific and practical discoveries of the day, and, amongst their surgeons we see but little evidence of emulative vitality. This should not be so, for many of them possess the same opportunities as were presented to the founders of the "School," and, if they recollect that the character of that School was *eminently practical*, they will do well to preserve this its most prominent feature. The statistics of the Dublin Hospitals, published in another department of this Journal, shew that the Medical classes are about equal to what they were years ago, and that numerous clinical lectures are annually delivered. Why is the Profession kept ignorant of the peculiar views of the lecturers, or of the novel and, no doubt, important features of the cases lectured upon? Proud, as we are, of the Dublin School, *cujus parva pars fuimus*, and of having conducted its leading Medical Journal, we look with a jealous eye to its reputation, and, when we recollect the amount of talent that formerly shed its lustre over the medical literature of Europe and of this Continent, we feel that our former *compagnons du voyage* should present themselves more frequently, and give us an opportunity of laying their observations before our brethren in the pages of the Canada Medical Journal, as we now do, by publishing the papers of Drs. Butcher and McClintock.—R.L.M,D.

On the treatment of fractures in the vicinity of the ankle-joint; with observations on the practice of tenotomy, as facilitating reduction of the broken bones. By RICHARD G. H. BUTCHER, F. R. C. S. I., Examiner on Anatomy and Physiology in the Royal College of Surgeons of Ireland, Surgeon to Mercer's Hospital, &c., &c., &c.

IN the *Dublin Quarterly Journal* of last month, there is a practical paper by Mr. Butcher, illustrative of the treatment of fractures in the vicinity of the ankle-joint. A number of instances are recorded, some of them of the most complex nature, yet, by the treatment laid down, and the apparatus recommended, the "integrity of the limb and its normal functions were in every instance preserved to the sufferer." Space will not permit a lengthened detail of the several cases and their management, but the concluding observations on the practice of tenotomy in similar cases, we shall transcribe in the author's own words:—

"One of my chief reasons for wishing to place these cases on record is the practice lately brought into requisition in London, in the management of the special fractures under consideration. I allude to *tenotomy*, the division of the extensor tendons, to facilitate reduction, as practised by Meynier, Berard, Laugier, and other French and German surgeons. A lengthened discussion not long since took place before the Medico-Chirurgical Society of London, on the practice of tenotomy, in some cases of fracture, when Mr. C. De Morgan related some cases in

illustration." In the first cited, the tendon was not divided until the day after the accident. 'The second case occurred in the author's own practice. The patient was a female, aged 66, of drunken habits, and was admitted into the Middlesex Hospital in March, 1849. She had been knocked down by a cab, and both bones of one leg were fractured a little above the ankle.' The report goes on to say:—'The author divided the tendo-Achillis on the ninth day, with instant relief to the suffering of the patient, and immediate removal of all untoward symptoms.' A very important feature in the management of these cases has been omitted altogether: the manipulation adopted for the reduction of the fracture, and the position in which the limb was placed afterwards. In the second case, it is stated that 'the tendon was divided on the ninth day.' I can easily understand that this might be requisite, if the fracture, with its attendant deformity, was left unreduced for that length of time; failure of the therapeutic means employed; and the spasmodic actions of the extensor muscles thus prolonged; for if fractured bones be left unreduced for such a lengthened period as this, *permanent* spasm seizes on the muscles and becomes established; a fact clearly pointed out and insisted on by Sir A. Cooper. Mr. De Morgan goes on to say:—'In the case related, the chasm between the divided portions at first did *not* exceed a quarter of an inch, that being sufficient to get the bone into position; and in a short time after there was no appreciable space at all.' This admission goes still further to proclaim that there is no necessity for division of the tendon to effect reduction, if the case is seen early; for, by flexing the thigh as I have recommended, we can relax the extensor muscles more than 'the quarter of an inch, that being sufficient to get the bone into position.' I am of opinion that, in ninety-nine cases out of a hundred, there will be no necessity for division of the tendon to effect reduction, if the limb be treated as I have advised; nay, on the contrary, I think, in some instances, the division of the tendon would be very injurious, as removing the support posteriorly from the ends of the broken bones, and thus permitting displacement in that direction. The mode in which the fracture box, which I have described, supports the leg in a horizontal line, with the thigh slightly flexed, padded, and cushioned, as illustrated by the foregoing cases, meets every requirement of the surgeon. Dupuytren's splint, in conjunction with these means, as used in some of my cases, is a most admirable adjunct; but, taken by itself, it will not answer as well for the management of the form of fracture under consideration; for if the limb be done up as directed by Dupuytren, and placed flexed upon its side, some lateral displacement will take place; or if, with the splint so applied, the leg be allowed to rest upon the heel, it is unsteady, and

rolls about, and the entire limb is in the extended position—a posture very objectionable, as making tense the tendo-Achillis.

From a review of these cases, and the observations upon them, the following facts are, I think, deducible:—

1st. That by proper position of the limb, and early reduction, coaption of the broken fragments can be effected, and spasm averted.

2nd. As the result of the broken bones being kept in accurate position, irritation is subdued, excess of callus prevented, and the motions of the joint left unimpaired; a fact of great practical importance here, for the experiments of M. Cruveilhier prove that various forms of irritation will make the periosteum and ligaments ossify, and it has been ascertained that in some cases of fracture near the joints the ligaments have sometimes been converted into bone, and M. Rayer has observed, from numerous interesting experiments, that a similar change may be exerted not only in the fibrous but also in the cartilaginous structures.

3rd. That tenotomy is not called for in the vast majority of cases, being perhaps only admissible when permanent spasm has located in the extensor muscles, owing to neglect of early reduction."

Dilatation of the Canal of the Urethra for the Expulsion of Small Calculi.

M. PAMARD, of Avignon, is known in France for having strenuously advocated the dilatation of the urethra as a substitute for lithotrity, when the calculus is small. In a late communication to the Academy of Medicine of Paris, M. Pamard mentions three cases recently treated, where the stones were about the size of a bean. Dilatation by Mayor's sounds and the copious injection of warm water, caused the calculus, in each case, to be expelled through the urethra. M. Pamard does not say whether the patients he has treated by this method have subsequently suffered from incontinence or not; this is, however, a point worthy of being cleared up.

PRACTICE OF MEDICINE AND PATHOLOGY.

(WE find the following interesting observations on that confessedly obscure affection, viz., "Bright's Disease," in a review of Dr. FRERICHS' Treatise, published in a late number of the "Medical Times and Gazette." We copy the article without abridgment, as its value would thereby be much diminished.)

"Bright's Disease and its Treatment" are still among the *vexatæ*

questiones of pathology and therapeutics, and as Dr. Frerichs is so well known and highly esteemed in this country on account of his physiological inquiries, we feel assured that an analysis of his pathological researches will be more welcome than any lengthened critique upon their results.

It is not easy to condense into smaller compass a work so crowded with facts as that before us; but, limiting ourselves to the observations and opinions of its author, and placing in the most prominent position those which have the greatest share of novelty, the probability of his receiving justice at our hands will be greater than if the attempt were made to weigh the merits of his treatise with those of others who have preceded him.

The first chapter contains an "historical retrospect," into which it is not necessary to enter, as the facts are more or less familiar to every student of pathology. It is interesting to observe the early date at which groups of symptoms were recognized as bearing more than an accidental relationship to each other, and it is still more so to perceive that the links connecting them were discovered only when inquiry proceeded upon the truly inductive method,—for we are conscious that there is in it the germ of a power which will eventually be great enough to grasp facts apparently more widely separated, and penetrating enough to perceive their bonds of union.

The anatomical changes in the kidney are divided into three forms, which may also be considered as stages of the process of disease. They are the following:—

I. The stage of hyperhæmia, and of commencing exudation.

II. The stage of exudation, and of its commencing transformation.

III. The stage of degeneration—atrophy.

In the first of these, which is frequently attended by hæmorrhagic effusion from the glomeruli, from the capillary plexus surrounding the urinary tubuli, or from the veins upon the surface of the cortex, the epithelium of the tubuli is not essentially changed, although the canals themselves, especially those of the cortical substance, are commonly filled with coagulated fibrin. These coagula are sometimes perfectly simple, and present themselves in this condition as casts of the tubes in which they were formed, while at other times parts of the epithelial lining, or more or less changed blood-corpuscles, may be found imbedded in them. This condition is not often met with anatomically (20 times in 292 *post-mortem* examinations), and is then the accompaniment of an acute, violent illness. The disease when chronic is rarely fatal at so early a period.

In the second stage the process of exudation increases, while the

hyperhæmic condition becomes less marked. Metamorphosis of the exuded matter follows; the epithelium and the fibrinous-casts of the tubuli break up into fatty molecules. In the Malpighian corpuscles similar exudation and fatty matter are seen lying between the capsule and its contained glomerulus, and then these bodies are raised above their natural size; but as long as the stream of secretion, poured from the glomeruli, is sufficiently powerful to remove the coagula of fibrin, this increase of dimension is not observed. In the urinary canals, especially those of the cortical substance, important changes are in progress; the epithelium undergoes complete transformation, losing gradually the form of its cells, presenting fatty infiltration to a variable extent, and ultimately losing its characteristic appearance and function, and becoming replaced by granular detritus and fat. This second stage was found in 139 in 292 examinations. It embraces the 1st and 2nd forms of Bright; the 2nd, 3rd, and 4th of Rayer and Rokitansky; the 2nd, 3rd, 4th, and 7th of Christison; and the 2nd and 3rd of Martin Solon.

In consequence of the degeneration of fibrin in the urinary tubuli and the Malpighian corpuscles, and the removal of this with the more or less transformed epithelium, the walls of these structures collapse, and part of the kidney is atrophied. It is this which constitutes the third stage of Bright's disease. This atrophy is brought about in some cases by the contraction of plastic matter, when the latter has been exuded into the interstitial textures. This is rare, however, and when present is only a co-operative cause of atrophy. This 3rd stage of Frerichs corresponds with the 3rd of Bright, the 5th and 6th of Rayer, the 5th and 7th of Rokitansky, and the 4th of M. Solon.

Among the not constant anatomical changes of the kidney, Frerichs enumerates and describes—1. Apoplexy; 2. Suppuration; 3. Cystic formations; 4. Calculous deposits; 5. Tubercle, etc. In the paragraphs upon the chemical changes in the kidney, the amount of solid constituents is given, and the proportion of fat in a hundred parts of dried kidney substance. In health the latter varies from 4·4 to 5·05 per cent. In morbus Brightii it was found varying from 4·40 to 13·9. Generally speaking, the quantity of fat was greater when the disease had advanced to the third stage, but this is not invariable; and the fact, that by chemical examination the quantity is often found to be much less than microscopic observation would lead us to expect, must, according to Frerichs, be considered as a proof that we are not justified in naming as fat all those globules which resemble it in form. In the kidney of a cat, and in that of a dog, the fat was found by Frerichs to vary from 27·20 to 32·50 per cent. Both animals were perfectly healthy; their urine

contained not a trace of albumen, a sufficient proof that morbus Brightii cannot be considered dependent solely upon fatty degeneration.

A statistical report, and tabular representation of the changes found (*post mortem*) in other organs, concludes the second chapter of the book. The cases are gathered from Bright, Christison, Gregory, Martin Solon, Becquerel, Rayer, Bright and Barlow, Malmesten, and the author's own observation.

The third chapter presents a short account of the general course of the disease in its two forms, acute and chronic; and we pass from it to the fourth, entitled "Special Symptomatology." In this the appearances (merely sketched before) are described in detail,—their frequency given numerically,—their causation examined,—and their clinical value in respect of diagnosis, prognosis, and treatment, pointed out.

The symptoms are treated under the following heads:—1. Those of disordered uro-poësis,—embracing, (a) pain in the region of the kidney; (b) percussion and palpation; (c) frequency of micturition; (d) changes of the urine. 2. Those of changed blood. 3. The habitus of the patient 4. Dropsy. 5. Changes in the action of the skin. 6. Uræmic intoxication, (chronic and acute). 7. Disturbances in the functions of the primæ viæ. 8. Pseudo-rheumatic pains.

It would be impossible to present anything but the most unsatisfactory analysis of this chapter, if we attempted to embrace all its contents. We shall limit ourselves to those included under the 6th and 7th heads; and we shall do so simply because the statements there made have more of novelty than the others.

1. *The Chronic Form of Uræmia.*—This steals slowly and unobservedly upon its victim, and is in almost every instance fatal. In the early stages of Bright's disease, there is a peculiar dullness, or sleepiness, in the expression of the face, and in the demeanour of the patient. He complains of dull headache,—a "light" feeling,—the eyes are expressionless,—the whole physiognomy is depressed in its features,—he is forgetful, and listless. These symptoms diminish if the secretion of urine becomes more abundant, and sometimes they disappear entirely for a time. In other cases they gradually increase in intensity; the sleepiness passes into stupefaction; the patients, who at first can be roused by speaking to them loudly, or by other means, and will then give rational replies, now sink into everdeepening lethargy; it is impossible any longer to arouse them; respiration becomes stertorous, and is replaced only by the gurgling of death. They generally lie perfectly still, without speaking. Delirium is rare; when it does occur, it is of the low muttering description; the patients repeat, times without number, a few words or sentences. Death is often preceded by convulsions; trembling of the

hands: distortion of the features, becoming quickly followed by clonic spasm, extending over the whole system of voluntary muscles. This is the more common form of nervous disturbance in Bright's disease. It may last for a longer or shorter time, and is often capricious in its course. Nevertheless, it is more to be dreaded than any other complication, for it is the most certain herald of a fatal termination. Differing from it in its manner of appearance, and very essentially different in respect of prognosis, is the

2. *Acute form of Uræmia*, which commences suddenly, and in a short time reaches its full intensity. It appears to attack the patient in one of three ways, the first symptoms being either those of depressed cerebral function, of irritation of the spinal cord, or of a combination of the two. Frerichs confirms, from his own experience, the statement of Dr. Addison, that when (under depressed cerebral function) the respiration becomes stertorous, there is not the deep guttural tone heard in hæmorrhagic apoplexy, from the movements of the velum palati, but that the sound is of higher pitch, and is caused by the passage of air against the hard palate and the lips. He also adds his testimony to that of Dr. Bright with regard to the persistence of consciousness in some cases where uræmia has evidenced itself first by convulsion. Although the prognosis is more favourable when the attack has this acute character, inasmuch as it generally follows a sudden suppression of the urinary secretion, yet it may prove fatal in a few days, or even hours; and the result must be anticipated as very unfavourable when acute uræmia intoxication occurs, as it does not unfrequently, during the course of chronic Bright's disease. A sudden change in the quantity or quality of the urine, disturbances of the organs of sense, etc., are insisted on as of importance in the light of warning symptoms. There are cases, however, where these are entirely wanting, and the diagnosis may be attended with great difficulty. A very constant, and in the earlier periods of uræmia, a prominent symptom, is vomiting. Altered ingesta are thrown up at first, but subsequently a thin, watery substance only. Its re-action, seldom acid, is generally neutral or alkaline; it emits frequently a sharply ammoniacal odour; and, if a glass rod dipped in hydrochloric acid is brought near it, copious white fumes are developed. If the inodorous, neutral, or even slightly acid fluid is heated with liquor potassæ, the presence of an ammoniacal compound is demonstrated. Frerichs has frequently sought for undecomposed urea in the vomited matters, but always without success. Artificial uræmia, induced in animals by extirpating the kidneys and injecting urea, is attended by the vomiting of similar matters containing a large quantity of carbonate of ammonia, but no undecomposed urea. The decomposition of urea into carbonate of ammonia does not (according to Frerichs)

take place in the stomach through the action of the gastric fluid, (as Bernard and Barresewil maintain,) but it is brought about in the blood within the vessels.

This form of vomiting must not be confounded with others, which are very common in the course of morbus Brightii, and which have their origin in chronic catarrh of the stomach, simple perforating ulcer, the misuse of spirits, etc., etc. The characters described serve to distinguish them from that of true uræmic character.

Serious disturbances of the nervous system appear to be in many cases delayed or altogether avoided by this vicarious excretive process. This has, however, been too confidently asserted to be a general rule by Bernard and Barresewil. In the stomachs of animals whose kidneys have been removed, ammoniacal compounds are constantly found; but the uræmic condition is not thus delayed in the majority of instances. It gives evidences of its presence at the time that the described change takes place in the secretion of the stomach. Ammoniacal salts are then found in nearly all the secretions, and compounds of that base may be discovered in the expired air. The relation of diarrhœa to uræmia requires further elucidation, and Frerichs does not give his opinion upon the subject.

The conditions of the perspiration and of the expired air are then closely examined. The former has been tested principally by the noses of pathologists, and is left doubtful; in the latter, the presence of ammonia is established; and in artificial uræmia, it was not until this base could be detected that any signs of disturbance in the nervous system were observed. Pathological anatomy is then shown to throw no certain and no constant light upon the nature of uræmic intoxication; and it is believed, that in the condition of the blood the key to the mystery is to be found. Its physical properties, in respect of consistence, colour, odour, etc., present no unvarying change of character. Its chemical relations are altered, and the alterations are essential. In all cases where the symptoms of uræmia presented themselves, carbonate of ammonia, and, in addition, undecomposed urea, were found in the blood. The quantity of the former is variable to a high degree; but in no one instance did it remain undetected. Frerichs gives another historical sketch of the theories of this branch of his subject. For a long time the opinion has been almost universally held, that the cause of these symptoms was to be found in the retention of some urinary elements in the blood. Osborne and G. Owen Rees form the exceptions; the former being of opinion that arachnitis was the cause, to which pathological anatomy returns the most satisfactory answer; and the latter, questioning the influence of urea in the production of coma, etc., from the perfectly correct observation, that

the appearance and intensity of such symptoms in morbus Brightii, hold no constant relation to the quantity of the urinary secretion; and further, that the blood may be surcharged with urea, and yet cause no symptom of uræmic poisoning. Rees considered hydræmia as the essential condition; but this cannot be so important as he would make it appear, since coma, convulsions, etc., occur in acute morbus Brightii, during either the earlier or later stages of scarlet fever, typhus, etc., without there being any evidences of such thinning of the blood. The question remains to be answered, in what way suppression of urine exerts the influence assigned to it, and which of its elements is the active agent? By the experiments of Vauquelin, Sigalas, Bichat, Courtin, and Gaspard, repeated with additions of his own, Frerichs proves, that the presence in the blood of a large quantity of urea, of uric and acid, or of urine itself, with extractives and salts, cannot cause the symptoms commonly observed when suppression of the secretion takes place. The result of a course of inquiry undertaken by Frerichs in 1849 and 1850, is that for the production of uræmic intoxication, the presence of any or all of these substances is insufficient, but that the urea must be decomposed through the agency of a peculiar ferment substance, and carbonate of ammonia set free within the blood-vessels. The production of this decomposing agent in febrile affections is not difficult to suppose, and the rapidity with which symptoms of uræmia are developed when morbus Brightii supervenes upon scarlet-fever, typhus, etc., together with the suddenness of their appearance in a person whose blood has been for a long time overladen with urea (without them) lend support to the view. The injection of carbonate of ammonia into the blood induces all the symptoms of uræmia, and without defining the precise nature of the ferment body, but asserting that a very slight modification of one of the normal elements of the blood would be sufficient for the purpose, Frerichs, by a course of experiments, considers that he has established his theory with regard to uræmia.

It would be impossible, within the limits of this review, to follow our author closely through the minutiæ of the concluding chapters. We can but indicate the topics which form their basis, so that our readers may form some estimate of the book.

In the chapter upon the *complications* of morbus Brightii, the several diseases of the heart, arteries, veins, liver, and spleen, &c., &c., are examined and described. The *frequency* of Bright's disease, its *duration*, *course*, and *terminations*, are then considered; and separate chapters are devoted to the questions of etiology and pathogenesis, essence of the disease, diagnosis, prognosis, varieties (forms), and therapeia. An Appendix, containing clinical reports of sixteen cases, and the results of a series of experimental researches, concludes the volume.

Frerichs describes the following forms:—1. Simple. 2. Cachectic. 3. That of the drunkard. 4. That occurring in acute blood-disease, (cholera, scarlet fever, measles, typhus, &c.) 5. That accompanying pregnancy.

In the chapter upon treatment, the disease locally and generally, its more constant and its occasional complications, are severally dwelt upon. The author does not commit himself to the system of depletion, of strengthening, of continually produced diuresis, purgation, or diaphoresis, but gives the moderate and judicious employment of all the various agents mentioned a position in his list, the peculiarities of the case under consideration leading to the choice of that which is most suitable.

In respect of the treatment when uræmic intoxication is present, Frerichs recommends acids, which should form innocuous compounds with ammonia in the blood, such as the vegetable acids.

Spontaneous development of gas in the blood, a cause of sudden death. By M. DURAND FARDEL.

M. DURAND FARDEL read a paper before the Academy of Medicine of Paris on the spontaneous development of gas in the blood. The history of the following case, which formed the principal part of the paper, may be looked upon as a description of the disease, which, notwithstanding the writings of Morgagni, of Reyrolles, and Ollivier, is still only imperfectly known.

A lady, living at Versailles, aged 56, rather tall and fat, came to Vichy, along with her husband, who was affected with gravel. It appeared that this lady had enjoyed very good health, not having been indisposed, at least for some years back. She had ceased to menstruate about six or seven years ago, and had been subject to no hæmorrhoids nor epistaxis; did not complain of headache, nor any other disorder; her digestion seemed to go on regularly; she never suffered from deafness or loss of memory; she had a good appetite, and led a regular life; belonged to the middle class of society. She did not complain of rheumatic or gouty pains, but she sometimes complained, not of palpitations, but of a slight difficulty of breathing. Her breathing was habitually short, as frequently happens to fat people, and which she never attributed to any other cause.

This lady, being at Vichy, wished, as is the fashion, to take the baths, and obtained authority for that purpose from the physician who attended her husband. She also drank some glasses of the mineral water, but in small quantity.

July 20, 1850. She proceeded to the thermal establishment to take

her second bath at four o'clock in the morning. She had been in good health in the evening, had dined as usual, and had slept well. In going to the establishment, her respiration was more difficult than usual; she had to rest herself sitting before taking the bath, and the attendant seeing her so oppressed, advised her not to take the bath for that day. At the end of half an hour she wished to get out of the bath; her maid, who had not left her, had not remarked anything particular about her. But she did not feel at ease, and when she got up from the bathing-place to change her dress, she appeared agitated, and complained of oppression; then she got out, and sank into a chair before she could be covered with a dry sheet. Respiration had become difficult, although she made violent efforts to breathe; she had lost the power of expressing herself. In the meantime, I had been sent for at the first symptoms of the affection. Five minutes had not elapsed before I was with her. She was then dead.

I found her sitting in a chair, supported by the persons who surrounded her, still covered with her wet bathing shift. The face had completely lost its colour; the lips slightly violet; the face not distorted or disfigured; no froth on the lips; the limbs were flaccid, and quite insensible; complete absence of pulse and sounds of the heart; pupils dilated and immoveable; conjunctiva insensible to the touch.

Although this state left no doubt of the reality of the death, I made a large opening in the median basilic vein of the right arm. There flowed immediately a little blood, not black, but violet and frothy; that is to say, accompanied by bubbles of gas, of unequal volume, which came from the vein at the same time. I remained more than a quarter of an hour making useless endeavours, tickling the uvula, applying ammonia to the nostrils, &c. During this time I did not quit the arm, examining the exit of the frothy blood, which continued to flow from time to time, under the influence of pressure applied on the forearm from below upwards. One time, a jet squirted out with some force, and lasted for five or six seconds, as if driven out by a bubble of gas, which was developed in the interior of the vessel; a slight quantity of white froth showed itself at the lips.

The autopsy was made twenty-two hours after death, the 31st of July, at three o'clock in the morning. The body presented no appearance of putrefaction; some lividity only on the depending portions of the trunk and members. The heart was very large; the right cavities distended with liquid blood, rather violet-coloured than black, syrupy, very frothy; the bubbles of gas enclosed were some (very numerous) as big as the head of a pin; others, less common, as large as peas. When pressure was applied over the course of the two venæ cavæ, the blood which flowed into the right auricle was frothy, like soap and water. The pari-

etes of the right cavities of the heart presented a superficial violet colour; the left side was completely void of blood, and not coloured; the left ventricle was considerably hypertrophied; the orifice of the heart did not present any appreciable alteration, as also the aorta. All the abdominal venous system was distended with violet and frothy blood; also numerous bubbles of gas were found in the blood of the splenic and portal vein. The lungs filled the chest; presented a few adhesions, and some appearances of emphysema; their colour was reddish outside, but of a deeper tint internally, where it presented traces of considerable sanguineous congestion, without infiltration of blood. There was considerably frothy congestion in the more depending parts. The bronchi contained some whitish frothy mucus. The abdominal organs presented nothing more worthy of notice than a considerable sanguineous congestion of the liver, spleen, kidneys, and a remarkable congestion of the veins of the epiploon and mesentery. The epiploon was very fat; the stomach rather large, and containing about half a glass of clear colourless mucus. The intestines were not opened. The encephalon did not present the same degree of congestion as the other organs; the sinuses of the dura mater contained only a little liquid blood, not frothy. The brain and origin of the spinal marrow, examined as soon as possible, appeared completely natural, a little injected with blood; no bubbles of gas appeared in its vessels.

We publish this case in all its details, as science possesses as yet very few cases of this kind. The observations of Morgagni, wanting in certain details, do not allow of a certain judgment. M. Reyrolles, in two cases of death by hæmorrhage, found the blood frothy in the heart and veins.

Finally, M. Ollivier, of Angers, published a case (*Ann. Gen. de Méd.*, 1838) which leaves no doubt as to the existence of the disease which M. Durand Fardel observed in this case. A curious circumstance, doubtless observed before, enabled M. Durand Fardel, to state the existence of gas at the moment even of death. The bleeding performed at the arm gave issue for more than a quarter of an hour to blood, which, trickling from the vein of a body deprived of life, carried with it numerous bubbles of gas.

To what cause can the origin of this gas be attributed? This is a question still undetermined, and which may be perhaps solved at some future time by the chemical analysis of the gas found in the blood. Whatever it may be, the observations of M. Durand Fardel tend to prove that it is owing to a spontaneous exhalation from the veins, caused by a spontaneous alteration of the fluid, of which we know neither the nature nor the cause.—*Presse Méd. de Bruxelles.*

Brazilian Method of Treating Dysentery with Infusion of Ipecacuanha.

This method, long ago advocated by Helvetius, Margrave, and Pison, consists of the following measures: From thirty grains to two drachms of ipecacuanha are powdered or bruised, and from eight to twelve ounces of boiling water poured over the drug. Ten or twelve hours' infusion are sufficient, and the patient takes the whole in the morning, either at once, or in two or three portions drank off closely one upon the other. Vomiting and abundant stools soon follow. The next day the same dose is taken, a second infusion having been made with the *grounds of the first*; the vomiting is now less, but nausea is kept up; and the third day an infusion with the same grounds is again made, and taken as before. The author of an article on the subject in the "Bulletin de Thérapeutique" does not think that the shock and nausea cure the disease, as is generally supposed, but that the success is obtained by the small quantity of ipecacuanha which is absorbed. He therefore gives the infusion, sweetened and aromatized, only in spoonfuls, so as to obtain a tolerance of it, and he has thus succeeded in curing the disease in a few days. The surest sign of improvement is a change in the character of the stools, which, from being muco-sanguineous, purulent, sanious, or composed of pure blood, become serous, bilious, and gradually more solid, just as the ipecacuanha acts favourably.

De la Transfusion du sang à propos d'un cas suivi de guérison; par les et docteurs Devay Desgranges, *médecin et chirurgien en chef désignés de l'Hôtel-Dieu de Lyon.*

(*Suite.*—Voir notre premier No.)

Les détails de l'observation qui précède mettant en évidence la gravité de la situation de cette femme, le danger prochain qu'elle courait, nous dispense de traiter, pour l'espèce, de l'opportunité de l'opération qui a été partiquée. Il est cependant une circonstance qui est venue depuis à notre connaissance et qu'il est bon de rappeler. Avant d'entrer à l'Hôtel-Dieu, cette femme avait été vue par un praticien recommandable, le docteur Keisser, qui, la veille, avait fait part à sa famille du pronostic funeste qu'il portait, en recommandant qu'on lui administrât les derniers sacrements. Des circonstances particulières à nous connues, relatives à la cause de la métrorrhagie, tendaient encore à augmenter nos appréhensions. En définitive, cette malade offrait le type de ce collapsus vital, déterminé par des pertes excessives et accidentelles, où, d'après nos lumières et notre conscience, nous devions tenter une médication exceptionnelle. Toute autre alternative nous échappant, il restait

à fournir à cette malade, dans sa défaillance, un petit capital du fluide animateur et nourricier pour soutenir le jeu des organes, gagner du temps et instituer à son profit une thérapeutique efficace. L'indication de la tranfusion du sang était formelle, nous l'avons saisie et mise immédiatement en pratique.

Les suites de l'opération, qu'il nous a été donné d'observer longtemps, ont présenté des phénomènes dignes d'intérêt. Ces phénomènes ont été *primitifs* et *consécutifs*. Ces derniers ont revêtu des caractères complexes, tenant à la fois des fièvres graves, de l'état puerpéral et de la chloro-anémie. Nous avons eu sous les yeux une affection composée de plusieurs éléments disparates, une affection *sui generis*, ne rentrant dans aeune partie du cadre nosologique. Nous verrons plus loin leur ordre de filiation.

Les phénomènes primitifs résultant immédiatement de la tranfusion ont duré vingt-quatre heures. Ils ont été marqués par la réaction s'élevant insensiblement jusqu'à une surexcitation qui pouvait donner quelques craintes. Ces phénomènes primitifs peuvent donc se diviser eux-mêmes en phénomènes immédiats et en phénomènes secondaires. Les premiers, que tous les assistants ont suivis avec le plus vif intérêt, ont consisté dans le réveil des fonctions de la vie de relation, à mesure que le fluide réparateur pénétrait dans l'organe central de la vie végétative. On assistait en quelque sorte à une résurrection : la malade semblait sortir du sommeil, elle inspirait plus fortement, et ses yeux, redevenus expressifs, indiquaient qu'elle avait la conscience de ce qui se passait autour d'elle :

> Spiritus intùs alit ; totumque infusa per artus
> Mens agitat molem.

Durant les premières heures qui ont suivi l'opération, la réaction ne dépasse pas ce mode physiologique. Le pouls est toujours fréquent, mais il offre plus de résistance ; les bruits anormaux perçus par l'auscultation du cœur et des gros vaisseaux ne se font plus entendre (ils avaient du reste disparu immédiatement après la transfusion). Jusqu'au soir, la malade paraît jouir d'un calme profond ; interrogée sur ce qu'elle épouve, elle indique par des signes qu'elle se trouve bien. Le soir, le scène change, une agitation insolite se déclare ; la nuit est marquée par le délire et les mouvements désordonnés. Cet état persiste pendant la journée du 27. L'explication de ces phénomènes secondaires pourrait, ce nous semble, être fournie par les données physiologiques suivantes : le sang injecté chez ce sujet anémique a déterminé immédiatement, par son contact avec les rouages de l'économie, une série de mouvements fonctionnels ; plus tard, ce même sang s'étant trouvé en

rapport avec les parties profondes de l'organisme où s'opèrent les métamorphoses, a déterminé une réaction de la part de celui-ci. Il y a eu une lutte, un conflit, pour emprunter le langage de Burdach, entre ce sang nouveau et les parties solides ; il a fallu un certain temps pour que l'équilibre s'établît.

Les jours suivants, des symptômes d'un ordre tout différent éclatent : la langue se recouvre d'aphtes, une odeur putride est exhalée et coïncide avec un écoulement lochial verdâtre. L'ensemble de tous ces signes revêt le cachet des fièvres adynamiques putrides. Néanmoins, en rapprochant les commémoratifs des circonstances actuelles, nous pûmes voir dans cet état l'influence de la fièvre puerpérale. Plus tard, la marche ultérieure de la maladie, la *phlegmasia alba dolens* qui a succédé, a donné gain de cause à cette interprétation. Cette malade subissait l'influence des suites de couche ; la transfusion l'avait mise à même de renouer son mode pathologique avec l'état antérieur, qui était un accouchement prématuré ; les phénomènes pathologiques que comporte cette dernière circonstance ont repris leurs droits avec le retour de la vitalité. La transfusion a donc eu pour effet de rétablir chez cette malade les choses où elles en étaient à leur point de départ : ce fait nous paraît avoir une grande valeur dans l'ordre physiologique.

A cette phase de la maladie succède une période d'hydroémie. Un anasarque presque général se déclare ; on perçoit un bruit de cuir neuf par l'auscultation du cœur ; celle de la poitrine pouvait faire craindre un épanchement dans les cavités pleurales. Ces derniers symptômes se dissipent au bout de peu de temps ; mais la chloro-anémie se prolonge pendant une douzaine de jours. Dans cet intervalle la malade reprend des forces, le 9 elle peut descendre de son lit et y remonter sans l'aide de personne. A ce moment elle touchait à la convalescence, lorsqu'à la suite d'une trop longue station elle est saisie d'un œdème douloureux de tout le membre inférieur droit. La tension des parties, la douleur siégeant au pli de l'aine, la réaction fébrile, ne laissent aucun doute sur la nature de cet accident : c'est le *phlegmasia alba dolens*. Cette complication, énergiquement combattue, cède au bout de peu de jours, elle a été comme la dernière phase de l'état puerpéral. A partir de cet instant, nous n'avons plus à enregistrer qu'une amélioration constante et soutenue. Si nous eussions accédé aux désirs de la malade, celle-ci eût pu quitter plus tôt les salles de l'Hôtel-Dieu ; mais nous avons tenu à consolider la santé de cette femme et à avoir un résultat irréfragable. La veille de son départ, elle fut visitée par les mêmes honorables collègues qui avaient assisté à l'opération, et comme nous ils ont constaté avec bonheur l'étonnante métamorphose qui s'était opérée.

Les détails peut-être un peu trop nombreux de cette observation indiquent que la thérapeutique n'a point été inactive, que ses resources ont été largement appliquées aux besoins de notre malade. Ceci n'enlève rien au bénéfice de la transfusion : cette opération a sauvé la vie de la malade en la soutenant quelque temps ; la thérapeutique a maintenu, puis définitivement fixé les efforts conservateurs. La première a allumé le flambeau, la seconde l'a animé.

I.—INDICATIONS DE L'OPÉRATION.

Nous pensions que ce n'est qu'à l'aide de sages restrictions posées à son emploi et puisées dans la saine observation des phénomènes physiologiques et pathologiques, que cette puissante resource de l'art parviendra à être définitivement adoptée, qu'elle passera dans les mains de la pratique, si nous osons exprimer ainsi. Toute autre marche la compromettrait. Posons donc en principe que cette médication doit être exceptionnelle. Nous la considérons comme un moyen *excitateur* et non comme un moyen *régénérateur*. Cette distinction pour nous semble capitale. Tout ce que l'on peut, en effet, raisonnablement attendre de la transfusion du sang, c'est le réveil des movements organiques dans un cas de mort apparente ou de collapsus général, déterminé par la soustraction rapide du fluide vivifiant. Les autres effets non-seulement sont incertains, mais pleins de dangers. Qu'attendre de la transfusion, chez le vieillard décrépit, dont les solides, modifiés par l'âge, ont perdu leurs rapports avec un sang jeune et riche ? Qu'en attendre pareillement chez un sujet dont l'organisme est profondément détérioré par une madadie chronique ? L'analyse de notre observation démontre que la transfusion provoque des effets secondaires assez intenses. Or de pareils phénomènes déterminés chez des personnes se trouvant dans une des catégories citées plus haut, engendreraient de la part des solides une réaction mortelle. L'histoire désastreuse des débuts de la transfusion doit d'ailleurs être pour nous un fécond enseignement. Cette méthode a péri dès son origine, parce qu'on s'en est servi dans un but régénérateur : les tentatives vraiment utiles qu'elle avait fait éclore ont été abandonnées par suite des abus de l'ignorance et des fausses théories humorales.

Ainsi, pour nous, l'indication de la transfusion du sang réside dans un état d'anéantissement posthémorrhagique. Mais là, il y a encore d'importantes distinctions à établir. Il faut que le sujet, antérieurement à l'accident, soit sain, ou du moins qu'il ne soit atteint d'aucune maladie *cum materia*. Une affection organique (tubercules, cancer, squirrhe, etc.) compliquerait singulièrement les chances de l'opération. Il en serait de même d'une inflammation étendue des viscères ou des mem-

branes qui aurait débuté avant l'accident hémorrhagique : dans ce cas la transfusion, par son effet secondaire, ne ferait qu'accroître le stimulus ; le bénéfice ne serait que temporaire. C'est, ce nous semble, la cause de l'insuccès d'une des dernières opérations partiquées par un chirurgien distingué de la capitale. Aussi sommes-nous convaincus que l'opération de la transfusion du sang, appliquée aux suites des hémorrhagies puerpérales, doit réussir en raison directe du moins de temps qui s'est écoulé depuis l'accouchement. Ainsi elle a infiniment plus de chances de succès sur une femme épuisée par une perte qui suit immédiatement l'accouchement que sur celle qui l'éprouve quelques jours après. Dans le premier cas, la soustraction brusque du fluide sanguin arrive sans qu'aucun chargement considérable se soit encore opéré dans l'organisme ; dans le second des mouvements fluxionnaires se sont déjà établis sur les organes du bas-ventre. La meilleure condition est donc celle-ci : soustraction brusque et accidentelle du sang chez un sujet n'ayant point encore éprouvé de modifications morbides. Mais loin de nous la pensée d'établir une contre-indication à l'opération dans les autres circonstances. C'est ainsi que chez une accouchée réduite à un état d'anéantissement complet par suite d'une métrorrhagie arrivée le septième ou le huitième jour, nous la conseillerions ; dans ce cas, il nous semble, qu'avant de se préoccuper des résultats indirects que peut avoir la transfusion, il faut faire face à un péril imminent qui est l'extinction vitale. Les dangers à venir peuvent être écartés par d'autres moyens, le danger présent ne peut l'être qu'à une condition, et on doit la remplir. Il en sera de même pour les suites des *hémorrhagies passives*. Parmi celles-ci, nous rangeons certaines formes d'épistaxis, d'entérrhagies, qui ont des résultats foudroyants. L'extrême déperdition sanguine amène un état syncopal ; si le particien n'a point l'espoir de ranimer la vie par les moyens ordinaires, pourquoi, alors, n'userait-il pas de la transfusion ? Dans l'anémie extrême, suite de blessures, l'opération aurait été quelquefois pratiquée sans avoir pu conserver la vie. Elle trouve cependant dans cette circonstance son indication. Peut-être, dans les opérations infructueuses, s'agirait-il de sujets dont le système nerveux aurait été violemment troublé par la cause traumatique ? peut-être s'agirait-il de plaies d'armes à feu, où l'excitation nerveuse joue un rôle si considérable ? C'est là un point de la question qu'il est important d'approfondir de nouveau.

II.—DU SANG A INJECTER.

A. Chez l'homme, il faut du *sang humain ;* la question est tranchée. A défaut même de ce que nous savons sur la plasticité du sang qui diffère de l'homme aux animaux, sur la forme et le volume des globules qui

ne sont pas les mêmes dans toute l'échelle animale, le bon sens suffirait.

B. Une fois résolue cette première question, il n'y a plus lieu de se demander lequel du *sang artériel* ou du *sang veineux* mérite la préférence. Ouvrir l'artère à une personne qui se dévoue, l'exposer aux accidents d'une pareille blessure, quel chirugien voudrait le faire? Ce serait inhumain. L'avantage, d'ailleurs, qu'on retirerait du sang artériel serait par trop minime, puisque les expériences sur les animaux de même espèce ont également réussi avec le sang noir qu'au moyen du sang rouge. La différence ne devient sensible que si l'on opère sur des espèces éloignées. Si l'on transfuse, comme l'a fait Bischoff, du sang de mammifère à des oiseaux, le sang veineux les tue sur l'heure; le sang artériel les laisse vivre.

C. *L'âge*, le *sexe*, bien que n'entrainant pas des différences majeures, sont néanmoins cause de quelques variations qu'il est bon de connaître.

D'après M. Denis, de cinq mois à quarante ans, le chiffre des globules augmente et la quantité d'eau diminue; de quarante ans jusqu'à la mort, c'est le contraire: la proportion de l'eau s'accroît, celle des globules diminue. Et comme conclusion, le sang d'une personne adulte qui n'a point quarante ans doit être préféré, puisque les globules sont regardés à juste titre comme la partie vivifiante du sang.

D'un sexe, à l'autre, la composition du sang n'est pas rigoureusement la même: chez l'homme, il y a plus de globules; chez la femme plus d'eau, plus d'albumine. La fibrine est égale. Voici, au reste, les chiffres de cette différence, tels que nous les devons aux remarquables travaux de MM. Becquerel et Rodier.

SANG.	HOMMES.		FEMMES.
Eau.....	779	.....	791
Globules.....	141,1	.....	127,2
Fibrine.....	2,2	.....	2,2
Albumine.....	66,4	.....	70,5

En tenant compte des chiffres précédents, et sans nier que la transfusion entre personnes du même âge et du même sexe ne soit très-rationnelle, ne pourrait-on pas dire: Le sang de l'homme adulte mérite la préférence pour la transfusion à une femme; il la mérite à plus forte raison si c'est un homme qu'on opère? En effet, puisque le sang de l'homme est plus riche en globules et que la proportion d'eau est moindre que chez la femme, il est donc plus vivificateur; sous le même volume, il peut donc fournir plus d'éléments réparateurs à un organisme appauvri. La fibrine, il est vrai, ne varie pas pour les deux sexes; mais l'albumine, ce principe coagulable si voisin de la fibrine qu'on redoute, est en moindre quantité. Notre tendance, on le voit, à conclure que le

sang de l'homme adulte, en règle générale, vaut mieux pour la transfusion, est suffisamment motivée.

Le sang doit provenir d'un individu sain. En agir autrement, ce serait méconnaître une vérité évidente ; ce serait rechercher des causes d'insuccès.

D.—La *quantité* du sang injectée, dans les cas récents dont les détails nous sont connus, est en moyenne, pour chaque malade, de 240 grammes, le *minimum* étant de 90 grammes (Marmonier) et le *maximum* de 480 grammes (Simon). En général, deux à trois cents grammes doivent suffire, si l'on veut être prudent, si l'on tient à ne pas fausser les indications de la tansfusion ; car enfin, comme le dit M. le professeur Bérard, avec le sens élevé et le savoir qui le distinguent, " il n'est pas nécessaire de rendre à un animal ou à un individu quelconque, qu'une hémorrhagie a rendu anémique et plongé dans un état de mort apparente, autant de sang qu'il en a perdu. L'indication urgente est de remettre en mouvement des rouages qui ont cessé de fonctionner, afin que l'individu qui a été soumis à la transfusion puisse ensuite former du sang par sa propre activité." (P. Bérard, t. III, p. 216.)

E.—La *défibrination* du sang doit être rayée des procédés opératoires, bien que Muller la propose en invoquant les expériences de MM. Prévost et Dumas, Dieffenbach, Lischoff, qui ont pu rappeler à la vie des animaux par l'infusion d'un sang défibriné. Les dangers que fait naître la fibrine sont-ils donc imminents autant qu'on le suppose ? La séparation de ce principe du sang est-elle en réalité sans inconvénients ? Notre conviction est que la transfusion, réduite aux proportions qui lui conviennent, doit être pratiquée avec du sang naturel, et tourmenté le moin possible.

La défibrination du sang a trouvé récemment un interprète éloquent dans M. Monneret, alors qu'au sein de l'Académie de médecine il donnait la relation du cas qui lui appartient.

" Le sang, dit M. Monneret, cesse de posséder ses propriétés normales dès qu'il a abandonné le vaisseau qui le renfermait. La fibrine n'est plus dans son état de dissolution parfaite ; elle commence immédiatement à se séparer sous forme d'un liquide blanc et brillant. On ne l'aperçoit pas encore à l'état solide et sous la forme d'un caillot limité et distinct qu'elle prendra plus tard ; elle ne constitue alors qu'un vaste réseau aussi volumineux que le sang lui-même, parce qu'il n'est pas encore contracté et réduit à sa plus petite dimension ; mais on peut affirmer que cette propriété si remarquable qu'a la fibrine de se contracter existe dans les gouttelettes du sang qui vient de sortir du vaisseau. Il est facile de comprendre le danger auquel expose cette solidification rapide que rien ne peut faire éviter, si ce n'est le battage opéré avec le sang extrait

de la veine. Cette fibrine, en passant dans les vaisseaux, ne tarderait pas à y provoquer des obstructions mortelle." (GAZ. MÉD. 1851 page 665.)

Si la fibrine se sépare immédiatement quand le sang est reçu dans un large vase à la température ambiante, à coup sûr il n'en est plus de même si le vase est profond, s'il est chauffé à +40° centigrades; ces deux conditions retardant la formation du caillot, ralentissent forcément la coagulation de la fibrine qui en est la cause première. L'essentiel est que ce retard soit assez long pour permettre que le sang étranger arrive encore liquide dans les veines de la personne malade, qu'il y soit perdu dans la masse du sang qui reste, et que cette fibrine qui tend à se coaguler soit divisée à l'infini.

Or cela est possible, puisque la transfusion a réussi sans causer d'accidents; cela se retrouvera d'autant mieux, qu'on aura le soin de n'injecter que juste assez de sang pour maintenir les fonctions organiques. En fait, ces obstructions mortelles, dont on nous fait une peinture si noire, sont moins fréquentes qu'on ne le suppose. La raison en est que la quantité de fibrine étrangère qui passe au travers des poumons, dans un temps donné, est très-minime, surtout si l'on prend soin, nous ne saurions trop le répéter, de ne jamais transfuser que peu de sang et d'aller doucement.

" En défibrinant le sang, dit plus loin M. Monneret, on se prémunit contre ce funeste accident (obstructions), mais on ne fait encore pénétrer dans les vaisseaux qu'un sang altéré." (*Loc. cit.*)

Nous sommes du même avis sur ce point, et nous n'en concluons que mieux contre la défibrination du sang.

" Lorsqu'on retire la fibrine du sang, ajoute encore M. Monneret, les globules ne subissent pas une altération plus marquée que si l'on employait du sang pur et avec ses divers éléments." (*Loc. cit.*)

C'est ce qu'il faudrait démontrer. Nous trouvons inadmissible que les globules ne s'altèrent pas par le battage, quand tout à l'heure M. Monneret insistait sur l'altération du sang au sortir du vaisseau. Que le microscope, l'analyse ne démontrent rien, c'est possible; mais si le sang reçu dans un vase inerte est réputé *cadavre*, nous pouvons bien soutenir que des globules battus sont des globules *tués*.

En résumé, la défibrination enlève au sang un élément dont on peut très-bien se garantir; en second lieu, elle le dénature au point que ce n'est plus du sang que l'on transfuse, mais seulement une infusion médicamenteuse que l'on pratique. Elle doit donc être repoussée.

F. Les sels de soude et de potasse, comme on le sait, peuvent empêcher la coagulation du sang. Il suffit de 14 parties de sulfate de soude pour retarder de plusieurs heures la coagulation de 1,000 parties de sang; le carbonate de soude produit le même effet à une dose moitié

moindre. De prime abord, on pourrait croire qu'en vertu de cette propriété les sels de soude et de potasse sont d'un usage commode pour la transfusion ; au fond, il n'en est rien. Ils restent sans utilité par la facilité qu'on a de devancer la coagulation et de terminer l'opération en toute sécurité ; ils ne sont pas sans danger, puisqu'ils diminuent la plasticité du sang et augmentent dans les mêmes proportions les tendances aux hémorrhagies.—*Gazette Médicale de Paris.*

(*La fin au prochain numéro.*)

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

On sudden death in the puerperal state. By ALFRED H. McCLINTOCK, M. D., F. R. C. S. I., Ex-Assistant of the Dublin Lying-in-Hospital.

IT may be asserted, without fear of contradiction, that the subject of death from sudden or latent causes in one which claims the deepest attention of the physician and the medical jurist. At any time the occurrence of this casualty excites painful and universal interest: but under no circumstances does it create feelings of such profound regret and dismay to all parties concerned as when it happens to a newly-delivered woman, and I question whether a man can meet with any reverse in his practice which so seriously or so unjustly prejudices his character in the estimation of the public.

Professor Meigs, in his treatise upon Obstetrics, has made the following remark :—" A woman lies down on the *lit de misère*, in order that she may give birth to a child; an attack of puerperal fever too often converts it into her bed of death. A man goes to his bed in fever under the apprehension of approaching death ; he is *rescued* by the physician, but the accouchée who perishes is *lost*. There is a great difference in the sentiment connected with the cases." Now, if this observation be true of a death in childbed from obvious and progressive disease, and where the fatal result has from the first been apprehended, with how much more force does it apply to the cases of rapid and unexpected death in childbed? Occurrences of this kind happily are rare ; but they are long remembered, and the panic they give rise to spreads far and wide, to the no small disparagement of the medical attendant's reputation. The records of innumerable examples of this fatal accident are to be found scattered through the periodicals and other works on medical literature; but notwithstanding their confessedly obscure nature, and the interest with which they are invested, no one, so far as I am aware, has made any attempt at collating them, or putting together in a connected,

tangible form whatever fragments of information we possess on this most important subject. This, sir, constitutes the only apology I can offer for bringing the present communication under the notice of the Surgical Society. In it I shall endeavour to lay before you some at least of the causes which experience would seem to show were adequate to the sudden destruction of life in the puerperal state. In justice to the late Dr. J. Ramsbotham, it is right to state that he is the only author I can find who has given a distinct consideration to this subject. In the *Medical Repository* for 1814, he published some cursory observations "On sudden Death after Delivery," and these, with a few additions, re-appeared in his "Practical Observations upon Midwifery," under the title of "Collapse after Labour." He relates four instances from his own practice of death taking place rather suddenly and without any very manifest cause soon after delivery. His remarks, however, do not tend to throw any light upon the pathology of this accident, and of the four cases which he recites one only was examined post-mortem, but without yielding any positive result.

Writers on medical jurisprudence recognize three diseases which may rapidly extinguish life and leave no morbid appearance, and these are, the simple apoplexy of Dr. Abercrombie, syncope, and the asphyxia idiopathica of M. Chevallier. No unequivocal example of the former in a puerperal patient has come to my knowledge, but of the two latter some instances may be adduced. * Idiopathic asphyxia "causes death almost instantaneously, or in a few minutes, or sometimes not for an hour and a half. The symptoms are those of fainting merely, and the only appearance in the dead body is flaccidity of the heart, with an unusual or total want of blood in its cavities." (Christison.) A very instructive example of this mortal affection has been recorded by Professor Beatty. The subject of it was a healthy woman, aged 40, who was in the ninth month of pregnancy. She complained first of weakness and sick stomach, and almost immediately after fell back dead. He examined the body with the utmost care, and the appearances disclosed were such as directly led to the conclusion, that the cause of death was idiopathic asphyxia.

M. Chevallier's original paper on the disease was published in the first volume of the *Medico-Chirurgical Transactions*, and he there narrates an example of sudden death from this cause in the person of a lady who had given birth to twins about three hours previously. He himself

* It may be remarked here, that some very competent authorities look upon the mortal affection described by M. Chevallier, as merely a form of syncope; and certainly very strong evidence can be adduced in support of this opinion.—(*Vide* Dr. Wright's "Pathological Researches on Suffocation and Syncope:" London, 1850.

conducted the post-mortem examination of the body, and from what he there found he inferred that death could only be attributed to this peculiar species of asphyxia. The same author also cites from Morgagni a case of rapid death in childbed, in which the necroscopic appearances led him to think that the woman's existence was terminated from the same cause. I am much indebted to the kindness of Mr. Barker, of Cumberland street, for the permission to mention here the circumstances of two cases that came under his own observation some years ago, which serve very forcibly to illustrate this part of my subject. In each of these cases death took place quite suddenly and unexpectedly, not very many days after delivery. In both instances a coroner's inquest was held, which was the occasion of Mr. Barker's knowing anything about them. As may be well supposed, he submitted the bodies of these women to a very extensive and close scrutiny, but he failed in discovering anything to account for death, except an unusual flaccidity of the heart, with a complete absence of blood in its cavities. We may fairly conclude with him, therefore, that dissolution was the result of idiopathic asphyxia, or of some cognate syncopal affection.

These cases require no comment. The evidence they contain of death having been produced by the operation of a cause similar to that pointed out by M. Chevallier, is to my mind conclusive. That there are not more instances of the kind to be found recorded, may, in some measure, be accounted for by the attention of observers being too exclusively directed to the abdomen in their examination of these cases post-mortem; and, secondly, from the fact of the subject of M. Chevallier's paper not having been as generally known and understood as it ought to be. If the actual possibility of such a cause of death as this be admitted, there is no reason that I can see why a puerperal woman may not be the subject of it. Further, if we look upon the idiopathic asphyxia of M. Chevallier as nothing more than a variety or form of syncope, the liability of its invading a woman in childbed becomes still more apparent from the state in which her constitution is left by the act of parturition—a state of which the prominent characteristics are, an unusual proclivity to diseased action—an excitable condition of the vascular, and a morbid susceptibility of the nervous system. The shock of labour is not recovered from for many days, and during this period (the length of which necessarily varies under different circumstances) the *vis vitæ* is minus: hence any impression of a severe kind, whether affecting the mind or body, is not met by the same vital resistance as at other times. With these well-known facts before us, there need be little hesitation in our drawing the conclusion that many of the unexplained cases of sudden death in the puerperal state are to be ascribed to idiopathic asphyxia, or fatal syncope.

Under the head of "Dystocia Syncopalis," Dr. Merriman gives the following history:—"An accoucheur was once attending a young woman in labour of her first child. Soon after it commenced, and during his absence, she fainted without any obvious cause. On his return the circumstance was mentioned, but as by this time she appeared perfectly recovered, no further notice was taken of it, and she was safely delivered without any other unusual symptom. On the third day after delivery she took a dose of some aperient medicine, and while in the act of relieving herself fell back and immediately expired. Probably no care would have prevented this unfortunate event. It was perhaps inexpedient to give the patient a purgative under such circumstances, a clyster would have been a more appropriate remedy, and at all events an erect posture should have been strictly forbidden."

Let us now pass on to the consideration of some of the other reputed causes of this catastrophe. It is an acknowledged law that protracted pain exhausts the principle of life, and in this way it is attempted to account for some of the anomalous cases of speedy dissolution after delivery. Touching this point, Mr. Travers has given some observations which it would be culpable to omit, coming from so high an authority. "Pain," says this author, "when amounting to a certain degree of intensity and duration, is of itself destructive. Difficult and protracted parturition is every now and then fatal from this cause; and even in cases in which neither extraordinary difficulty nor protraction was experienced, a fatal prostration has sometimes supervened which has admitted of no other explanation. The delivery has been complete, without any degree of physical injury, and not more than an ordinary quantity of blood has escaped from the vessels of the uterus. Yet the woman, in spite of the encouragement derived from the consciousness of safety to herself and infant, and of comfort from the conclusion that her sufferings were at an end, has never rallied either in strength or spirits; but after an interval, not exceeding a few hours, passed in a low and sinking state, has unexpectedly, and with little perceptible alteration, expired." (Inquiry, 2nd ed., p. 48.)

In a large proportion of the cases where this state of prostration or collapse has manifested itself, there had existed for some time previously a strong mental impression or foreboding of disaster, which presentiment, as it is termed, must have contributed materially in bringing about the fatal result. That a lengthened occupation of the mind by one dominant idea of a gloomy character should exercise a marked depressing influence upon the vital energies, is a fact of which every physician is fully aware, and of which there are innumerable examples on record. "I am well convinced of the fact," says Dr. J. Ramsbotham, "that the existence of

a permanent despondency during the latter stages of pregnancy has a powerful influence in diminishing the beneficial agencies of those powers by which the necessary changes subsequent to labour are completed." (Pract. Obs., p. 119.) Mr. Travers even goes so far as to admit that among newly-delivered women "cases have undoubtedly occurred, demonstrative of the fatal effect of this depressing cause;" and in illustration he relates two cases, one of which may be here quoted:—"A young lady, happily married, impressed probably by some unexpectedly fatal occurrence in the circle of her friends, entertained, from the commencement of her pregnancy, a morbid fear of death in childbirth, which, although unwarranted by any indication, became, from its continuance and increasing strength, a source of anxiety to one of her immediate and confidential relatives. She was attended by a skilful and experienced accoucheur, who was also her relation. He assured me that the labour was in all respects easy and safe, and that not a single unfavourable circumstance attended it. The child was still born and imperfect. The mother died suddenly in six hours after delivery. Every region of the body was examined with care by an eminent anatomist, and presented the appearance of health." Many other examples of a similar nature could be brought forward were it necessary for my purpose, or did time permit.* One case, however, of recent occurrence, I must here relate, as it cannot be so appropriately introduced elsewhere. My best thanks are due to Dr. Gartlan, of Dundalk, for favouring me with the notes of this case, and also for the permission to lay them before the Society. Although the history is imperfect in so far as there was no examination of the body after death, still it is deeply interesting, and may serve to illustrate some of the pathological features of this melancholy class of cases:—"The late Mrs. K., aged 35, was confined of her first child, a live girl, on the 16th of March, 1850, after a tedious labour, which I had to terminate with the forceps. She recovered well, and after nursing for about four months, again conceived. Towards the end of her pregnancy she became full of apprehensions and fears for the result of her illness. She expected her accouchement in May, and about the middle of that month her anxiety and alarm so much increased as to require my paying her a morning and evening call, though in every other respect her health was perfectly good. On the evening of the 26th she felt more than usually uneasy and nervous, and early the following morning she awoke from a sound sleep, in pain, and after a very brief illness gave birth to a large and healthy girl. In three quarters of an hour after the expulsion of the child, she had a gush of about eight ounces of blood,

* The uncle of Dr. Merriman, the author, once met with a very striking instance of the fatal effects of violent mental emotion in a parturient woman.

whereupon I immediately removed the placenta which was lying in the upper part of the vagina. She then seemed as well and as free from all uneasiness or hæmorrhage as any patient could be, and continued so for about an hour, when she reiterated her forebodings that "something bad might still happen." In about half an hour from this she complained of pains like after-pains, and felt getting weak, so that I gave her some sherry and water, and at her own request a little brandy. Being apprehensive of hæmorrhage, I made a most careful examination, and satisfied myself there was no bleeding outwardly, nor into the cavity of the uterus, which was perfectly contracted. This examination I repeated several times subsequently. In spite of an opiate the spasmodic pains persisted, and the abdomen began rapidly to swell, accompanied with oppression of the breathing. I then applied a turpentine stupe to the belly, administered an enema, and gave a stimulating carminative draught, containing ether, laudanum, and aromatic spirits of ammonia. No improvement followed this treatment; on the contrary, the tympanitic distension of the abdomen had proceeded to such an extent that the patient exclaimed she would burst unless relieved. This induced me to send to my house for the long rectum tube. At this period Dr. Brunker gave his valuable help in the case, and we introduced the tube, and repeated the stimulants, but all to no purpose, as she was visibly sinking, the act of respiration being seriously impeded by the enormous bulk of the tympanitic abdomen. She expired six hours after delivery, and four from the first sensation of pain and distension." Such is Dr. G's history of this case; he has appended a few observations which I think it well to read. "I am fully convinced that hæmorrhage could have had nothing to do with this lady's death, as there was none externally, and both Dr. Brunker and myself repeatedly ascertained that the uterus was well contracted, thus showing there was none internally. She was a very fat person, of a nervous leucophlegmatic habit, she occasionally had complained of some pain in her left side, but never evinced any symptom of heart disease. During the menstrual periods, she had always been affected with great gaseous distension of the abdomen. The most remarkable feature, however, in her history was the strong presentiment she entertained for some time before her labour that she would not survive it. The mother of this lady, I may remark, died rather suddenly two or three days after her birth; and the knowledge of this fact very much fostered, if it did not actually give rise to, the long train of dark anticipations which possessed her mind for so many weeks before the occurrence of labour." It is sufficiently plain, I think, that the mere loss of blood in this case was not *per se* sufficient to destroy life, as the labour was rapid and easy. After a protracted and difficult labour, it is surprising how small an amount of

hæmorrhage will occasionally prove fatal; in illustration of which I would beg leave to narrate the facts of a case which was communicated to me within the last few days. It occurred to Dr. Cuppaidge, of Castlerea, who obligingly favoured me with its history. It is as follows:—"In the beginning of last month I was sent for one morning at ten o'clock A. M., to see Mrs. C., a farmer's wife, who was the mother of five children, and of rather delicate constitution. Her last labour had been very tedious, and was terminated by instrumental assistance, the forceps I believe. On my arrival I learned that she had been in strong labour for three days and nights. She seemed much exhausted and was perspiring freely, with a feeble rapid pulse. The pains were frequent and violent, the fœtal head was pretty low in the pelvis. After waiting some time, and seeing that the child made no advance, I applied the forceps, and extracted it with ease, but not in time to save its life. The placenta came away in a very few minutes, and I put on the binder tightly. In about a quarter of an hour, observing her to yawn and appear restless, I examined if there was any discharge, and put my hand over the uterus. It felt rather relaxed, and on making pressure it contracted, expelling a small quantity of blood. By this she seemed improved, but in about twenty minutes began again to sigh, and yawn, and toss her arms about, which made me grasp the uterus more forcibly, whereby a few coagula were dislodged. Symptoms of prostration, with extreme restlessness, dejection of countenance, and rapid intermitting pulse, now began to develop themselves, and though I gave her abundance of burnt whiskey—the only stimulant procurable—she continued to sink, and expired an hour and a half from the time of delivery. I can safely say the whole amount of hæmorrhage in this case did not exceed what I have repeatedly seen to occur in other patients, without producing the slightest symptom of weakness or syncope."

[To be continued.]

OPHTHALMIC AND AURAL SURGERY.

On the Treatment of Polypi of the Ear. By JOSEPH TOYNBEE, Esq., F. R. S., Fellow of the Royal College of Surgeons of England, Aural Surgeon to St. Mary's Hospital, and Consulting Surgeon to St. George's and St. James' General Dispensary.

(Continued from page 58.)

THERE are two other directions that it is important to bear in mind. 1. The surface of the polypus is sometimes rendered so dry by means of the cotton-wool, that there is not sufficient moisture to

cause the escharotic (especially when containing iron) to deliquesce; the point of the potassa cum calce is, under these circumstances, to be slightly moistened. 2. Should the patient experience pain at the time of the application, or during the few minutes afterwards, the ear should immediately be syringed with tepid water,—the effect of which is at once to remove all painful symptoms, and to arrest the action of the escharotic.

GELATINOUS POLYPUS.

Next in frequency of occurrence to the vascular polypus is the one which has been termed the gelatinous polypus. This name has been given to it from the soft jelly-like appearance presented by its free portions, and from the similarity of their general aspect to the gelatinous nasal polypus. Careful and minute examination, especially when aided by the microscope, does not, however, confirm the propriety of the above designation; on the contrary, as it will be seen in the course of my observations, the term fibro-gelatinous polypus would be applied to it with much greater propriety, and to the variety hitherto called the vascular polypus perhaps the term cellular will be most fitted.

STRUCTURE OF THE GELATINOUS POLYPUS.

This growth generally increases to a large size. I have specimens in my collection which vary from being as large as the last joint of the little finger to the size of a small nut. Sometimes this polypus has a single root and body, but more commonly two or more bodies have a common base. The root, which is attached to the wall of the meatus, is generally not larger than from a line to two lines in diameter. Examining the polypus as it approaches the orifice of the meatus, it will be found that, attached near to the root, are numerous small rounded growths, very much like to delicate granulations; these appear to be the rudimentary growths, confined to their small size by the pressure exercised upon them by the walls of the meatus and the large expanded part of the outer portions of the growth. Approaching the orifice of the meatus, the polypus assumes a globular form, and consists of from one to as many as six or eight rounded heads. When these heads are numerous, they present pedicles, varying in length from a quarter to half an inch, by which they are connected to the root. The surface of this polypus is smooth, and it is constituted by a layer about a quarter of a line thick; this is separated from it by maceration, and it consists of cells having every resemblance to those of the epithelium covering the buccal mucous membrane. This layer of epithelium is as thick and white as ordinary writing-paper, and, when detached and floating about, it keeps

the forms of the polypus from the surface of which it has been separated. The interior of the gelatinous polypus is composed of corpuscles and fibrous tissue; the proportions of the two elements vary in different specimens, but the fibrous tissue generally predominates. The corpuscles are of a rounded form, and they vary both in size and shape. In a specimen, which was a good example of this variety of polypus, as it is generally presented to the surgeon (it being white and soft, so as to be easily compressible by the thumb and finger,) I found that these cells varied in shape from being quite round to an irregular oval,—from being the size of a blood corpuscle to one half or even one quarter the magnitude of that body,—the greater number appeared certainly smaller than the blood disc; but they presented every variety of size between that of a blood disc and a fine granule, and there was very little symmetry in shape or size even between those that were nearest to each other. These cells are not generally in close contact, but they are separated by a delicate gelatinous substance, which is sometimes quite transparent and structureless; in other parts, where the polypus is resisting, these cells are separated by delicate, wavy bands, having the appearance of fibres, and to the surface of these fibres the cells are observed to adhere. In some parts, these wavy, gelatinous-looking fibres form almost the entire substance of the polypus; the rounded cells being scattered very sparingly, in other parts, these fibres are absent. The wavy fibres run in the long diameter of the polypus; they possess considerable toughness, and, although they are easily separated from each other, so that individual fibres can be isolated, they cannot be torn across without the use of considerable force. The single fibres are extremely fine; so that, when they are separated from each other, they have the appearance of transparent lines, whose diameter varies from half to a quarter of that of the blood disc. Interspersed through the substance of the polypus were many spindle-shaped crystals. Upon the application of acetic acid, the fibres became swollen, and assumed a confused, gelatinous appearance, and lost all their fibrous character; the corpuscles were also converted into a similar mass, in which, however, a large number of granules were observable. The action of the acetic acid also brought into view a large number of fine, spindle-shaped crystals, some of which only had been previously observed. The gelatinous polypus sometimes attains to so great a degree of hardness, that it is with difficulty cut through by a pair of scissors; this peculiar condition appears to be produced by the increase in quantity and solidity of the fibrous tissue, and in the diminution of the quantity of corpuscles, and in the absence of the gelatinous matter between them. It has been already stated, that the vascular polypus is composed of

rounded cells; these, however, differ very much from the cells of the gelatinous polypus, in being all of nearly the same size and shape, and in being larger than those previously described. The cells of this polypus do not appear to be separated by any substance, but they are agglomerated together, and form the entire mass of the polypus. The exterior, which is smoother than the gelatinous polypus, and which is always covered by its secretion, is composed of a layer of elongated epithelial cells, which are frequently terminated by ciliæ; the latter are often seen in active motion for a considerable period subsequent to the removal of the portion of polypus which they cover.

TREATMENT OF THE GELATINOUS POLYPUS.

The difference in the structure of the two kinds of aural polypi naturally prepares the surgeon to expect that the treatment requisite for their removal would also differ. This is undoubtedly the case. The use of the potassa cum calce, which has proved of so great value in the destruction of the vascular polypus, is of but little service in the treatment of the gelatinous, or, more properly speaking, the fibro-gelatinous polypus. The escharotic produces but comparatively slight effect upon fibrous tissue, and the only plan of removing it is by extraction. For this purpose, the best instrument is a pair of ordinary dressing-forceps, the ends of which should be reduced in size, so as not to be larger than from a line to a line and a half in diameter. These forceps should be introduced into the meatus to the distance of half or three quarters of an inch, and the polypus seized as near as possible to its roots; the forceps should then be used as a lever, the outer part of the ear being the fulcrum, and the polypus turned out of the cavity. But little force is required, and, as a general rule, the diseased growth is removed without difficulty in an entire state. Upon examining the meatus after its removal, the surface to which it was attached is distinctly discernible, and, for a short time, there is a slight oozing of blood from it. In some cases portions of the root of the polypus remain, but they do not, generally, require any further treatment, but gradually atrophy and disappear. On the contrary, if any of the small globular bodies remain attached to the root, they rapidly increase, and the diseased growth has again to be submitted to operation. The removal of the fibro-gelatinous polypus is generally productive of relief, not only to the unpleasant head symptoms, which are caused by its pressure on the contents of the vestibule, but to the diminished power of hearing. The improvement in the power of hearing does not, however, as would be supposed, take place at once; on the contrary, it not uncommonly occurs that there is, at first, no increased power of hearing, but that it gradually and very

slowly improves. This may, perhaps, be accounted for, from the circumstance, that the polypus has for a long period exercised considerable pressure on the membrana tympani, or, where that structure no longer exists, upon the tympanic ossicles, and that these organs only slowly return to their natural state.

GELATINOUS POLYPUS IN THE LEFT EAR FOR SEVEN YEARS; IN THE RIGHT EAR FOR ONE YEAR—NOISES IN THE RIGHT EAR—GIDDINESS UPON PRESSURE OF THE POLYPUS—CURE BY EXTRACTION, FOLLOWED BY THE APPLICATION OF ALUM AND CHLORIDE OF ZINC.

Case 4.—Harriet Wenlock, aged 58, a washerwoman, strong, rather stout, and in good health, with the exception of the symptoms produced by the polypus, consulted me in the commencement of April, 1850. She stated, that seven years previously, without any other symptoms, discharge issued from the left ear, and it has never disappeared; shortly after the appearance of the discharge a rounded body was observed at the orifice of the ear. About a year ago the right ear began to discharge, and there soon appeared a swelling at the outer orifice. She complains of great noises in the right ear; these vary much; sometimes they appear like a humming, at others like a tinkling of a bell, then as if it were loudly ringing. When the surface of the tumour of the left ear is pressed upon she feels giddy, and, if it is continued, she loses her senses and falls. At present, and for a considerable period has been so hard of hearing, that she requires speaking to very loud close to the head. Upon examination of the right ear, a round, pale-coloured polypus, more than half an inch in diameter, was observed to protrude from the orifice of the meatus, and below it was another growth about half the size. At the external meatus of the left ear a rounded body was observable; this was not more than a line in diameter, and it did not extend beyond the orifice. Not finding any symptoms which indicated an affection of the bone, I thought it better at once to remove the polypi, and selected the right ear to commence upon. The diseased growth was removed with the greatest ease by the use of the dressing forceps, in the manner above described; the patient suffered only a slight but momentary pain, and there was a very trifling oozing of blood. Upon examination after its removal, the polypus was found to consist of the two rounded heads already noticed, each having a second mass about half the size, continuous with it, and extending nearly as far as the root; the latter was very narrow, not being more than a line or a line and a half in diameter. The surface of the expanded part of this polypus was found to be covered by flat scales, like those of epidermis, but

nearer to the root, elongated cells, armed with ciliæ, were also distinguished. The rounded parts which were exposed to the air were smoother and whiter than those which were concealed, the latter presenting a somewhat rugous surface. On April 22, a fortnight after the removal of the polypus, upon examination, the quantity of the discharge was greater than usual, and there was observed to be a rounded growth near to the membrana tympani, as if the roots of the polypus still remained; to this substance a solution, composed of half an ounce of alum to two ounces of water, was ordered to be applied thrice daily. The polypus was removed from the left ear; it consisted of a pedicle, a body, and three rounded heads, two of which had been seen at the orifice of the meatus during life.

April 29.—The power of hearing is improved; has had slight pain in each ear, also some giddiness. The discharge is less abundant, but still of an offensive odour. In the right ear the remnant of the polypus is seen attached to the upper part of the meatus, near to the membrana tympani; in the posterior part of the latter an orifice was observed. In the left ear the roots of the polypus appeared to fill as much as one half of the meatus. The drops of the solution of alum to be continued.

May 6.—*Right Ear.*—The discharge has ceased; the hearing has improved, and is much better after blowing the nose. The polypus has wholly disappeared; the mucous membrane of the tympammis seen through the orifice of the membrana tympani; it is thick and red.

Left Ear.—The roots of the polypus are much in the same state.

May 13.—The roots of the polypus in the left ear remain as a week ago. Applied the chloride of zinc to their surface.

May 27.—*Left Ear.*—Polypus smaller; again applied the chloride of zinc.

June 24.—Discharge from left ear gone. The polypus much diminished in size. Air passes through the left membrana tympani. The solution of alum was continued; and in a fortnight the polypus had wholly vanished.

GELATINOUS POLYPUS CURED BY EXTRACTION—HEARING POWER IMPROVED.

Case 5.—J. W., Esq., aged 24, a medical student, pale and not strong, consulted me on the 24th of October, 1851, on account of a very considerable degree of hardness of hearing so that he was obliged to be spoken to at a distance not further than a foot from his head; he also had an abundant discharge from the left ear. The history of the case was, that twelve years ago he had an attack of porrigo, for which the head was shaved; during this attack, he was very deaf in both ears; but he

quite recovered. A year ago he became slowly dull of hearing in the right ear; and for eight months the left ear has been gradually losing the power of hearing. Has had pain in the left ear lately, attended by discharge; the latter varies much in quantity, and has a very offensive odour. Upon examination, the hearing distance of the right ear with my watch was only half an inch; the surface of the membrana tympani was dull, and its substance opaque.

Left Ear.—Watch only heard when pressed upon the ear. A polypus filled the meatus and extended as far as the orifice of the meatus. This polypus was removed by the forceps in the manner already described, and the power of hearing slowly improved.

GELATINOUS POLYPUS REMOVED BY FORCEPS, AND POTASSA CUM CALCE APPLIED TO THE ROOTS—CURE.

Case 6.—Miss E. H., aged 26, consulted me on 4th April, 1851, on account of a discharge from the right ear. The history of the case, as detailed me, was, that, at the age of 16, she had an attack of scarlet fever, accompanied by pain in both ears, but especially in the right. The pain in the right ear was followed by a discharge which has continued up to the present time, with the exception of one occasion, on which it disappeared for a fortnight, when the pain was much increased. Upon examination a polypus of a leaden hue was observed to project from the orifice of the meatus; it was stated that this growth had been seen there during the four months preceding the application for advice, and that pressure upon it always produced giddiness. This polypus was found to be attached to the posterior and inferior part of the meatus, near to the membrana tympani. This growth was removed by means of the dressing forceps, and, as the roots had a tendency to increase in size, the potassa cum calce was applied once, and the growth was effectually destroyed.

(To be Concluded.)

De l'oblitération du Sac Lacrymal comme moyen de guérison de la Fistule Lacrymale; par M. STŒBER.

L'OPINION généralement répendue sur la cause de la fistule lacrymale est que l'inflammation du sac lacrymal provient de ce que les larmes y sont retenues. La conséquence de cette idée est qu'on guérit cette inflammation en détruisant l'obstacle qui arrête le cours naturel du fluide.

Sans vouloir établir l'innocuité de la stase des larmes dans la sac, M.

Stœber fait remarquer qu'on voit des personnes dont le canal nasal est obstrué pendant des mois et même des années, et qui peuvent, en comprimant le sac, faire refluer par les points lacrymaux du mucus limpide sans que leur sac lacrymal s'enflamme.

D'un autre côté, on a souvent vu le cours des larmes être rétabli par une opération, sans que pour cela l'inflammation chronique du sac, non plus que le larmoiement, cessassent.

C'est que le larmoiement ne dépend pas seulement de l'impossibilité qui existe pour les larmes de s'écouler dans le nez, mais aussi, et principalement, de ce que la phlegmasie du sac se propage à la conjonctive et de là à la glande lacrymale, dont la sécrétion, par suite, est augmentée.

S'il n'en était pas ainsi, si la majeure partie des larmes—à part les cas d'excitation plus forte—n'était pas évaporée ou absorbée à la surface de la conjonctive, l'occlusion complète du sac devrait certainement donner lieu à un larmoiement continuel. Or, bien au contraire, dans tous les cas où l'on a détruit le sac lacrymal, le larmoiement, qui jusque-là avait existé, a cessé, excepté dans les circonstances où l'œil est irrité soit par son exposition au froid, au vent, ou au contact de corps étrangers, soit par l'inflammation ou l'excitation—de cause morale—de la sécrétion lacrymale.

La cessation du larmoiement après la destruction du sac lacrymal s'explique si l'on admet que, dans l'état normal, la sécrétion des larmes n'est pas assez abondante pour donner lieu à un écoulement permanent dans les narines, et que, dans le cas de fistule lacrymale, il y a larmoiement seulement, parce que l'irritation du sac se communique à la conjonctive et à la glande lacrymale et augmente la sécrétion de celle-ci.

Partant de ces principes, M. Stœber, après Delpech, Nannoni, M. Desmarres, etc., a traité une fistule lacrymale en cautérisant le sac lacrymal avec la potasse caustique. Le sac s'oblitéra complétement, et la malade, qui jusque-là avait été fatiguée par les récidives opinâtres de sa fistule, fut complétement guérie. On la revit deux mois après l'opération, et elle affirma n'avoir jamais de larmoiement que lorsque l'œil était exposé à un vent froid.

Quant au manuel opératoire, M. Stœber recommande d'inciser le sac, d'étancher les mucosités ou le pus qui le remplissent, puis de promener sur toute sa surface un crayon de potasse caustique, en ayant soin d'appuyer un peu plus sur la partie inférieure qui correspond à l'entrée du canal nasal.—On devra aussi, afin de garantir la peau voisine, n'introduire le caustique qu'à travers une canule peu profonde et assez large pour permettre de le porter librement sur toute l'étendue de la face interne du sac.—*Gazette Médicale de Strasbourg.*

MEDICAL JURISPRUDENCE.

Elimination of Poisons.

M. F. ORFILA, the professor's nephew, has read a paper before the Academy of Sciences of Paris, on the above subject. He states that a great number of poisons, after being absorbed, mix with the products of the various secretions, as urine, perspiration, saliva, gastro-intestinal fluids. All poisons do not pass into these secretions, but the majority of them may be discovered in the urine. It is rather a remarkable fact, that arsenic and iodine do not pass into the bile. These are the only substances which have hitherto been sought in that secretion; it is, however, probable, that the same results will be obtained when other poisons are thus tried. Noxious principles are gradually expelled from the body in the manner above described—some in a short time, as arsenic and mercury; but others may be detected in the substance of the viscera, four, five, and even eight months after their introduction. The more the urine carries off a poison, the sooner will the latter be expelled from the economy. Arsenic and mercury pass into the urine so early as the seventh day after their introduction into the system, and they are quite expelled in a few days. Lead and copper are not detected in the urine, and the entire expulsion of these metals does not take place for eight months.

When a poison is absorbed, very good service may be rendered by the use of diuretics, purgatives, and diaphoretics. Still, a poison may be lodged in the economy, without our being able to suspect the fact by the analysis of the urine. As that portion of the poison which has been absorbed gradually decreases up to a certain period, it is quite impossible, and even absurd, to attempt calculating the amount of the poison which has been administered by the quantity found in the viscera, putting other sources of error out of the question, such as vomiting, loss during experiments, &c.

It is an error to suppose, that because a poison remains a long time in the system, it will continue so for an indefinite period, for when nitrate of silver is administered to dogs, the metal may be found in the liver five months afterwards, but not after seven months. It must be supposed that the mercury, lodging so long in the viscera, becomes in some degree *tolerated* there. M. F. Orfila believes, with his uncle, that antidotes may do much good, and neutralize the action of certain poisons, even when the latter have already passed into the blood, the liver, spleen, &c., both by forming less poisonous compounds, and by giving rise to certain combinations, which are more easily eliminated.

Canada Medical Journal.

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MEDICAL EDUCATION.

As the winter session has now terminated, it may not be out of place to make a few observations upon medical education, and the facilities presented for its cultivation in this city, as well as to point out some evils which we hope to see remedied before long.

If we examine the curriculum of the Licensing Boards of Lower Canada, we find that it is as extensive, and the time required for its completion as long, as those of the most celebrated Institutions of Europe. If we examine the condition of the Schools, we find that every branch of medicine is taught as fully and as completely as can be done in lectures, and that those engaged in the task of instruction, with few exceptions, have made their particular branches the subject of careful and special study, and that most of them are already experienced and well-known teachers, and those who have entered only recently upon this career, have been selected by their colleagues on account of their peculiar fitness for the office. We have also been informed that the lecturers of McGill College and the French School of Medicine have taken much pains with their classes, and have gone to much expense to procure means for illustrating their courses; we do know that each lecturer in the St Lawrence School of Medicine was bound to expend a considerable sum in procuring drawings, casts, diagrams, and preparations for the same purpose, and that many of them have far exceeded the stipulated amount.

Montreal now presents the interesting spectacle of a Colonial Town, aspiring to a position in medical reputation, and forms, at this moment, the commencement of a SCHOOL OF MEDICINE. Let us inquire if we actually possess the elements necessary to build up a medical reputation for our city? What are they? 1. Teachers, 2. Hospitals, 3. Schools, 4. Students, 5. A Medical Periodical, *independent of any party in the profession, or of any School or College.* Have we not all these? In what city of its size on this continent have we three incorporated Schools? In which have we three large Hospitals. As these advantages are of little use to the student unless the foundation of anatomy

be laid, we may ask, does any other city present as many or as ample opportunities for its pursuit as Montreal; assuredly not. But might he not avail himself more fully of these opportunities? To this point, we wish to direct the attention of teachers. At present the student is so much occupied by attendance upon lectures that he cannot devote as much time to practical anatomy and clinical study as the importance of these branches demand, and we see no remedy for it, but to alter the curriculum, so as to give but three lectures weekly on each subject, instead of five, or to give summer courses upon such subjects as clinical surgery and medicine, obstetrics, ophthalmic and aural surgery, medical jurisprudence, chemistry, materia medica, of which two 3-months' courses should be considered equal to one winter course: or to adopt the American plan of lecturing daily for four months, leaving the student the other eight months for hospital attendance, dissections and study. We are well aware we shall be told, that if the student follow the directions of his teacher, his study will be so distributed over the four years, as to leave him each winter, plenty of time for dissections and hospital attendance; but to this we answer, that McGill College exacts from students coming from other Schools, not merely an attendance on two courses of lectures, which is all that is necessary to constitute an *annus medicus*, but she compels the unfortunate candidate for her degree, to attend a full course of some ten lectures daily, commencing at 8 o'clock, A. M., and terminating at 8 o'clock, P. M., and as the last year of the student's pupilage should be devoted almost exclusively to practical study, this enactment prevents him becoming a practical man, he has no time for noting cases in hospitals, no time for attendance on practical midwifery, no time for dissections, his spare moments are divided between his illustrated manuals and the gentleman who presides over the *molendinary* department of his education. We repeat, we see no remedy for this evil, but the adoption of one of the plans we suggest, or the decision of the Licensing Boards, and more particularly of the College of Physicians and Surgeons of Lower Canada, to refuse recognition of attendance upon more than a certain limited number of lectures during each year of the student's pupilage, and to adopt such a method of examination as will detect the *crammed* student, and display his ignorance of practical surgery, medicine, and midwifery.

Rules for Bleeding in Pneumonia.—The following judicious remarks by Dr. Bennett, are perfectly in accordance with our own experience.—*Buffalo Medical Journal.*

"If we are called to a case at a very early period before exudation is

poured out, and before dullness as its physical sign is characterized, but when, notwithstanding, there have been rigors, embarrassment of respiration, more or less pain in the side, commencing crepitation, then bleeding will often cut the disease short. This state of matters is rarely seen in public hospitals. When, on the other hand, there is perfect dullness over the lung, increased vocal resonance, and rusty sputum, then exudation blocks up the air-cells, and can only be got rid of by that exudation being transformed into pus, and excreted by the natural passages. In such a case bleeding checks the vital powers necessary for these transformations, and, as a general rule, if the disease be not fatal, will delay the recovery. I believe this to be the cause of so much mortality from pneumonia in hospitals where bleeding is largely practiced, for, in general, individuals affected do not enter until the third or fourth day, when the lung is already hepatized.—*Edinburgh Monthly Journal.*"

NOTE.—We copy the above passage, which is now going the rounds of the periodicals, not for the purpose of recommending the practice inculcated, nor to express our approval of the pathological doctrines advanced in its favour, but to show that neither the one nor the other is based on sound principles.

In the first place, we deny *in toto*, that the *stage* of pneumonia is a guide to blood-letting, and we aver, that from the beginning, many cases of pneumonia will not bear either general or local bleeding, but require to be treated by active counter-irritation, and stimulating expectorants and that others bear badly even tartar emetic, and would inevitably sink under blood-letting. We recollect having had thirteen cases of pneumonia under our care in one month, of these seven were examples of the sthenic, and six of the asthenic form; the first were treated on antiphlogistic principles, the second required stimulation by wine, stimulating expectorants and active counter-irritation, in some instances dry-cupping being also employed. All these cases recovered, and the duration of the disease was about equal in the two classes, yet the disease presented itself in the same degree in both forms of the affection—*i. e.* in some it was merely in the first, and in others, partly in the first and partly in the second stage. Our clinical observation in hospital and private practice, is quite at variance with the views advanced by Dr. Bennett, and we state it as the result of our experience, *that the question of bleeding ought not to be decided by the stage of the pneumonia, but by the condition (sthenic or asthenic) of the patient, and by the type of the inflammations prevalent at the period.* As an illustration of this, we may mention, that, in our practice at St. Patrick's Hospital, we have had to prescribe blood-letting more freely and more frequently of late, than we have done for

years, as nearly all the inflammatory affections have assumed a strongly marked sthenic character.

Nor do we agree that *perfect dullness* is ever heard over a hepatized portion of lung, *comparative* dullness, no doubt, is heard, but *perfect or absolute* dullness never. There are only two diseases involving the lungs, in which *complete or perfect dullness* is heard, and these are thoracic tumours (generally aneurismal or cancerous) and pleuritic effusion. Of the other signs named by Dr. Bennett, viz: *increased vocal resonance and rusty sputum*, the first alone is peculiar to hepatization, for rusty sputum is the product of *congestion and not of plastic exudation*, and, consequently, is common to the first, as well as the second stage of the disease, *for we never find the stages of pneumonia so well marked as that one lung shall exhibit in all parts the first stage, and another exhibit the second stage without any blending of these stages, or gradual transition from one to the other*. On the contrary, we always find an inflamed lung, which has passed on to hepatization, exhibit in various parts, the first or congestive stage of the disease, and we are not without evidence to satisfy us, that an *extensive* congestion is more destructive than a *limited* amount of hepatization, and, consequently, taking these pathological facts as our guide to treatment, we should not be deterred by the detection of solidification from abstracting blood, if other symptoms did not contra-indicate this measure. But Dr. Bennett forgets that one form of pneumonia, and, according to our experience, a difficult one to treat, or rather we should say, one in which recovery slowly takes place, is unattended with rusty expectoration, and in this variety we believe there is less congestion of the capillary tubes, and a greater tendency to plastic exudation than in other forms. We have made this point the subject of study for some years, but as yet have arrived at no *positive* conclusion; our impression is, that the explanation now given is the correct one. In this variety of the affection, we have found greater benefit from mercurial treatment, than from any other, and have been in the habit of taking *the presence of solidification without a rusty coloured expectoration*, as the index for its administration. In Dr. Bennett's directions, this form of pneumonia is overlooked. The objection to blood-letting, that it "checks the vital powers," necessary for the transformation of exudation matter into pus, is quite gratuitous. Is exudation matter never absorbed? Is a hepatized lung never restored to its original condition without the expectoration of pus? Is exudation on the pleura always followed by empyema? Is the lymph of iritis always followed by hypopium? When Dr. Bennett has answered these questions in such a manner as to square with his assertions and

to accord with well established pathological laws, we shall be prepared to discuss how fatal blood-letting may interfere with the cure of pneumonia, in which the plastic exudation is undergoing transformation into pus. But as we believe that the *material which causes solidification of the lung*, [as evidenced by increased dullness, bronchial respiration, bronchial voice, and absence of vesicular murmur, &c.,] may be, and daily is, removed by treatment, we are convinced that the means ordinarily used for that purpose, act with more certainty and success when the abstraction of blood *can* be performed, and that whilst it renders absorption of exuded matter more active, it checks the congestion existing in other parts of the lung, which would, in its turn, be quickly followed by hepatization and more serious disorganization of the lung. These are our reasons for differing from Dr. Bennett, and we make no apology for trespassing at such length on our readers' attention, as the matter has occupied much of our clinical study, and is withal, one of great importance to the practitioner. We may ask, in conclusion, is it not more likely that the large mortality from pneumonia in Hospital practice, alluded to by Dr. Bennett, arises from the indiscriminate use of the lancet in cases quite unsuited to any form of depletion, than from its being employed in the second stage of the disease? And is he right in stating that Hospital patients generally come under treatment when the disease is in the *second* stage? We have records of numerous cases where the disease had not passed beyond the first stage, occurring in Hospital patients, both in Europe and in this country. We must, therefore, question the truth of his statements, which, from beginning to end, we believe to be incorrect.—R. L. M'D.

ST. PATRICK'S HOSPITAL.

From the Quarterly Report, ending 30th April, it appears that the number of intern patients amounted to 211, and that of the externs to 306, making a total of 517 who received advice and medicine at the Institution during the last three months. We regret that our limits do not permit us to insert the diseases of the externs, many of which were of a very interesting and instructive character.

SURGICAL CASES.

Erysipelas		Sloughing of Integuments of Neck	1
Simple 3		Paronychia	2
Phlegmonous 4	9	Rupture of Tendo Achilles	1
Œdematous 2		Morbus Coxae	1
Abscesses	1	Nævus	1
Caries of Bones of Feet	1	Abscess of Parotid Gland	1
Caries of Bones of Hand	1	Anthrax	1
Scrofulous Ulcers	1	Cystitis, Chronic	1
Caries of Tibia	1		

Strictures of Urethra	4
Spinal Disease	1
Synovitis of Knee Joint	2
Concussion of Brain	1
Prolapsus Uteri	1
Cancer of Cheek	1
Cancer of Breast	1
Encephaloid Tumour of the Neck	1
Bubo	1
Tumour of Parotid Gland	1
Fracture of Radius	3
Radius and Ulna	1
Femur	1
Scapula	1
Extensive Compound Comminuted Fracture of Bones of Foot	1
Fistulous Ulcer of Breast	1
Punctured Wound through Foot	1
Frost Bite	3
Ganglion	1
Contusion	4
Ulcers	7
Anchylosis	2
Phlegmonous Erysipelas of front of the Neck, opening from Anterior Mediastinum into Trachea	1
Hæmorrhoids	1
	63

OPERATIONS.

Amputation of Great Toe and Metatasal Bone	1
Amputation of Thumb and Meta Carpal Bone	1
Amputation of Fingers	7
Catheterism too frequent to enumerate.	
Removal of Cancerous tumour from Cheek, and Genio-plastic Operation	1
Removal of Encephaloid tumour of Neck	1
Removal of Parotid tumour	1
Amputation of Breast	1
Operated on Nævus with heated needles	1
Removed Uvula	1
Operated by Subcutaneous Puncture on Ganglion	1
Reduced Fractures of Radius	3
Do. Radius and Ulna	1
Do. Femur	1
Do. Scapula	1

MINOR OPERATIONS.

Bleeding	25
Cupping	27
Issues	2
Seton	1
Applied Moxa	3
Other minor operations not enumerated.	

MEDICAL CASES.

Continued Fever	22
Remittent do	1
Intermittent do	1
Maculated Typhus	3
Delirium Tremens	1
Bronchitis	5
Pleuritis	6
Phthisis	11
Pleurodynia	4
Morbus Cordis (Hypertrophy)	1
Pericarditis	1
Endocarditis	1
Laryngitis	1
Hepatitis	2
Peritonitis	1
Dysentery	3
Gastrodynia	2
Apoplexy	2
Paralysis	1
Sciatica	2
Neuralgia	1
Pneumonia	6
Chronic Gastritis	3
Constipation	1
Cynanche Tonsillaris	2
Dropsy	2
"Bright's Disease of Kidney"	1
Rheumatism Acute	4
" Chronic	2
Lumbago	2
Psoriaris	1
Acne Rosacea	1
	93

OPHTHALMIC SURGERY.

Entropium	1
Staphyloma	1
Granular lids with Vascular Nebulæ	6
Purulent Ophthalmia	1
Corneitis	4
Ulcers of Cornea	1
Congenital Opacity of Cornea	1
Ectropium	1
Fistula Lachrymalis	2
Sclerotitis	3
Iritis	1
Prolapsed Iris	1
Ophthalmitis	1
Cataract	4
Dislocation of Lens	1
Glaucoma	2
Retinitis	3
Amaurosis from Cerebral Diseased	3
Hydrophthalmia	1
	46

AURAL SURGERY.

Herpes of Meatus	1	Hypertrophy of Membrana Tympani	3
Inflammation and Suppuration of Meatus	6	Rheumatism of Middle Ear	4
Hardened Cerumen	1		15

OPERATIONS.

Operation for Entropium	1	Cataract) Extraction 1) Division 3)	4
Staphyloma	2	Palpebral Abscess	2
Blepharoplasty (formation of Eyelid)	1	Chemosis	8
Fistula Lachrymalis	2		

R. L. MACDONNELL, M. D.
A. H. DAVID, M. D.
H. HOWARD, M. R. C. S., &c.

REPORT OF THE MONTREAL GENERAL HOSPITAL, FOR THE LAST QUARTER ENDING 26TH APRIL, 1852.

(Extracted from the Official Report.)

"The Committee of Management beg to submit to the Governors of the Institution their Report for the Quarter.

"From the Report of the Medical Board it appears that one hundred and forty in-door and five hundred thirty out-door patients have received the benefit of the Institution during the quarter."

Number of the patients admitted during the last quarter:—

IN-DOOR PATIENTS Belonging to		OUT-DOOR PATIENTS Belonging to	
Montreal	97	Montreal	535
		Emigrant	1
	97		536
Males	56	Males	285
Females	41	Females	251
	97		536

Total number remaining in Hospital, 26th April, ... 42
Of which there are Medical cases, ... 31
Surgical cases, ... 11

MEDICAL DISEASES.

Admitted during the last three months.

Anasarca	2	Exema Capitis	1
Albumenaria	1	Emphysema	1
Ascites	1	Fever (Common Continued)	2
Bronchitis	2	Typhus	2
Cephalalgia	1	Typhoid	1
Cynanche Tonsillaris	1	Gastrodynia	1
Delirium Tremens	1	Hermiplegia	1
Diarrhœa	1	Hepatitis, Chronic	3
Dyspepsia	3	Hysteria	1

Hypochondriasis	1	Pneumothorar	1
Icterus	1	Pleuro-pneumonia	1
Influenza	6	Psora	1
Meningitis	2	Rheumatism	4
Œdema	1	Scrofula	1
Pericarditis	1	Tuberculosis	2
Phthisis	6		92

SURGICAL DISEASES.

Admitted during the last three months.

Arthritis	2	Hæmorrhoids	1
Bursitis	1	Luxations	3
Caries	2	Morbus Coxæ	1
Contusion	2	Ophthalmia	2
Fractures	3	Syphilis	2
Fistula in Ano	3	Ulcers	7
Perineo	1		28

OPERATIONS.

Bleeding	1	Minor Operations	37
Cupping	1	Teeth Drawing	50
Fractures	3		95
Issues	3		

His Excellency the Governor General has been pleased to make the following appointments, viz :—

Drs. James Sampson, of Kingston, Harmannus Smith, of Ancaster, James Wilson, of Perth, Basil R. Church, of Merrickville, William H. Brouse, of Prescott, Robert Edmondson, of Brockville, William W. Howard, of Farmersville, Henry H. Wright, of Reesorville, William Allison, of Markham, Roderick M'Donald, of Cornwall, George H. Park, of Hamilton, James Mitchell, of Dundas, John Fraser, of Pelham, Thomas C. Macklem, of Chippawa, Ephraim Cook, of Norwich, John B. Crouse, of Simcoe, George Southwick, of St. Thomas, William T. Aikins, of Toronto and Thomas D. Morrison, of Toronto, to be Associate Members of the Medical Board of that part of the Province called Upper Canada.—*Canada Gazette*, April 3, 1852.

His Excellency the Governor General has been pleased to grant Licenses to practice Physic, Surgery and Midwifery in that part of the Province called Upper Canada, to George D. Morton, of Holland Landing, in the County of York, and George Gillespie, of Picton, in the County of Prince Edward.—*Ib.*, April 17.

Appointments.—We are happy to announce that Dr. David has been appointed Consulting Physician, and Dr. G. E. Fenwick, Attending Physician, to the Ladies' Benevolent Institution of Montreal.

Communications have been received from Dr. Marsden, Quebec; Dr. Courteau, St. Roch; Dr. Kellogg, Hamilton; Dr. Williamson, Toronto; Dr. H. M. Dechene, St. Paschal; Dr. Crumbie, Streetsville, the latter we thank for his very flattering remarks.

Obituary,—At Hamilton, on Wednesday, the 24th ultimo, John W. Hunter, Esq., M. D., aged 36 years.

On Saturday, 3rd inst., at Lachine, of Typhus Fever, aged 41 years, Benjamin George Calder, Esq., M. D.

FRENCH MEASURES AND WEIGHTS.

As it is our intention to publish, from time to time, interesting articles selected from the French Medical Journals, we have great pleasure in acceding to the request of one of our esteemed confrères, in inserting the following Tables, extracted from the last edition of *Malgaigne's Surgery*. From it, the Practitioner in this Country will be enabled to appreciate the quantities of the different remedies mentioned in the French Prescriptions.

MEASURES OF LENGTH.*

New Measures.	Approximate Value.	Exact Value. Feet.	Inches.	Lines.
1 Millimètre.	1 Half-Line.	0	0	0.443
1 Centimètre.	4½ Lines.	0	0	4.433
1 Décimètre.	3 Inches 8 Lines.	0	3	8.330
1 Mètre.	3 Feet 1 Inch.	3	0	11.296

Old Measures.	Approximate Value.	Exact value.	
1 Line.	2 Millimètres.	2 Millim.	256
1 Inch.	3 Centimètres.	27	072
1 Foot.	32 Centimètres.	324	864
1 Ell (*aune*).	1 Mètre 18 Centimètres.	1188	
The English Inch.	2½ Centimètres.	25 Millim.	399
The English Foot.	30 Centimètres.	304	794
The Yard. (3 Feet.)	91 Centimètres.	914	383

MEASURES OF WEIGHT.

New Measures.	Approximate Value.	Exact Value. lbs.	oz.	gros.	grs.
1 Centigramme.	⅕ Grain.	0	0	0	0.19
1 Décigramme.	2 Grains.	0	0	0	1.88
1 Gramme.	20 Grains.	0	0	0	18.82
10 Grammes.	2½ Gros.	0	0	2	44.28
100 Grammes.	3 Ounces 2 Gros.	0	3	2	10.80
1 Kilogramme.	2 Pounds.	2	0	5	35.15

Old Measures.	Approximate Value.	Exact Value.	
1 Grain.	5 Centigrammes.	0 Grammes	033
1 Gros.	4 Grammes.	3	82
1 Ounce.	30 Grammes.	30	59
1 Pound.	500 Grammes.	489	50

* The following table shows the exact relation between the new French and the English Measures of Length and Weight.

Measures of Length.

Mètre, the 1-10,000,000th part of the arc of the Meridian from the pole to the equator.	39.370788 inches. 3 280899 feet. 1.093633 yard.
Décimètre, 1-10th of a mètre	3.937079 inches.
Centimètre, 1-100th of a mètre.	0.393708 inch.
Millimètre, 1000th of a mètre.	0.03937 inch.

Measures of Weight.

Kilogramme, weight of one cubic decimètre of water of the temperature of 39° 12′ Fahr.	2.6803 lb. troy. 2.2055 lb. avoirdupois
Gramme, 1-1000th part of a kilogramme.	1.5438 grains troy. 0.9719 scruples. 0.032 ounce troy.
Décigramme, 1-10,000th of a kilogramme	1.5438 grain troy.
Centigramme, 1-100,006th	0.1543 grain troy.

JOURNALS RECEIVED IN EXCHANGE.

New York Medical Gazette.
Ohio Medical Journal.
Philadelphia Medical Examiner.
Boston Medical Journal.
New Hampshire Medical Journal.
Upper Canada Medical Journal.
New Jersey Medical Reporter.
The Dental News Letter.
American Journal of Insanity.
Northern Lancet.

BOOKS RECEIVED FOR REVIEW.

A Treatise on Diseases of the Chest, by John A. Sweet, M. D. New York. D. Appleton & Co., 1852.
Received too late to be noticed in this number.

SUBSCRIPTIONS HAVE BEEN RECEIVED FROM

Dr. Dame, Rivière du Loup.
Dr. Verity, Hemmingford.
Mr. Judah. Montreal.
Dr. Bell, Wilson;
Dr. Blacklock, West Williamsburg.
Dr. Alcorn, Lennoxville.
Dr. Codd, Renfrew.
Dr. J. D. MacDonald, Perth.
Dr. Gigon, Terrebonne.
Dr. Merton, Farmersville.
Dr. McGee, Beverley.
Dr. Charest, Chateau Richer.
Dr. Gilmor, Three Rivers.
Dr. Dykeman. Lacolle.
Dr. Johnston, Sherbrooke.
Dr. Murray, L'Orignal.
Dr. Evans, Richmond.
Dr. Dorland, Belleville.
Dr. Fortune, St. Anicet.
Dr. Edmondson. Brockville.
Dr. Fenwick, Montreal.
Dr. Travers, Fingal, C. W.
Dr. Chewett, Toronto.
Dr. Brooks, Sherbrooke.
Mr. Mallon, Montreal.
Dr. McDonald, St. Francis.
Dr. Hill, Bytown.
Dr. Orton, Guelph.

COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

THE SEMI-ANNUAL MEETING of the BOARD OF GOVERNORS of the COLLEGE OF PHYSICIANS and SURGEONS, for the purpose of EXAMINATION, will be held in the City of Montreal, on TUESDAY, the 11th day of MAY next, at TEN o'clock, A. M.

Candidates are required to deposit their Credentials with either of the Secretaries, at least ten days before the meeting, and to fill up a Schedule of their education—forms for which can be obtained on application to the Secretaries; and they are also required to deposit, at the same time, the amount of Fees which would become due in the event of successful examination.

A. H. DAVID, M.D.
P. M. BARDY, M.D.
Secretaries.

Montreal, March, 1852.

1

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DRUGGISTS AND APOTHECARIES, 172 ST. PAUL STREET, CORNER OF CUSTOM HOUSE SQUARE, have constantly on hand a general assortment of DRUGS and CHEMICALS, which they are prepared to offer to the PROFESSION on as moderate terms as any House in the Trade, all of which have been selected with care, and are warranted to be genuine and unadulterated.

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WILLIAM SUTHERLAND, M. D., Lecturer on Chemistry in the University of McGill College, and one of the Physicians of the Montreal General Hospital.

HENRY HOWARD, M. R. C. S. L., Oculist and Aurist, Ophthalmic and Aural Surgeon, Clinical Lecturer to St. Patrick's Hospital, Surgeon to the Montreal Eye and Ear Institution, and Lecturer upon Ophthalmic and Aural Surgery, St. Lawrence School of Medicine.

J. E. CODERE, M. D., Professor of Materia Medica and Therapeutics, in the Montreal School of Medicine and Surgery.

Montreal, March, 1852.

1

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Montreal, March, 1852.

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"From an extensive experience I am well satisfied with the operation of the Water; to weak persons it is quite palatable, and I deem it preferable to any other of the Mineral Waters I am acquainted with. I look upon many of the Mineral Waters as a great boon conferred by Providence on mankind.

"WLF. NELSON, M. D.,

"*V. P. Col., Physicians and Surgeons, Canada East.*

Sold only at No. 4 Place D'Armes, Montreal.

Montreal, April 1, 1852.

ST. PATRICK'S HOSPITAL.

THE SUMMER COURSE of CLINICAL INSTRUCTION and LECTURES, at the above Institution, will commence on the 1st MAY next, and be continued until the end of July.

Clinical Surgery,.....DR. MACDONNELL.
Clinical Medicine,.....DR. DAVID.
Clinical Ophthalmic and Aural Surgery,.....DR. H. HOWARD.

N. B.—The WINTER COURSES commence on the FIRST MONDAY in NOVEMBER.

Montreal, March, 1852.

TO PHYSICIANS RESIDING IN THE COUNTRY DISTRICTS.

SAP OF THE MAPLE TREE.

MEDICAL gentlemen residing in the country parts of Canada, particularly in the vicinity of manufactories of maple sugar, will confer a favour by forwarding, early this coming spring, a *bottle of the sap*, to the address of the undersigned in Montreal, with the description of the *tree* producing it, the age, locality, and any other useful information regarding it.

If time will permit, an *examination* of the sap itself would be preferred, with a statement of the specific gravity of different kinds, its colour, sweetness, and amount yielded by the trees. Also, the botanical characters of the *best* trees, with their habits; and any information as to the time and mode of budding and foliation, and the influences which these processes exert over the characters of the sap; and further, a description as to the best mode of propagation.

The information thus afforded will be duly acknowledged from each gentleman, in a paper to be afterwards published by the undersigned, on the subject of the maple tree and its products.

March, 1852.

GEORGE D. GIBB, M.D.,
67 Craig Street, Montreal.

NOTICE TO ADVERTISERS.

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