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DOUBLE TALIPES—EQUINO-VARUS.

BY J. LIZARS LIZARS, SURGEON, TORONTO.

Strangers from the other side, and people from the country, often remark on visiting Toronto, "Why, what a number of cripples you have in this city!" No doubt it is a fact; but let us seek the reason for it, and we find two distinct causes for this superabundance of unfortunates in our midst. First, those who by freak of nature are "deformed, unfinished, sent before their time into this breathing world, scarce half made up," and those who by accident, by flood, or field have become unfit for the hard manual labor of a rural life, naturally resort to the cities where they may cultivate their brain power, and through one or other of the professions—especially the Church and the Bar, (for a medical man must have full use of his hands at least,) or in some of the lighter forms of labor, they may gain an honest, honorable livelihood, and perhaps achieve greatness, as through the goodness of an all-wise Providence a system of compensation is always at work, and those who lose one power are pretty sure of having others developed to a degree far surpassing what is usual.

Another reason for this concentration of cripples is, that they are brought to the cities to get that relief from their maladies which cannot be so easily furnished in the country,—1st, because in the country there are no hospitals or instrument makers; and 2nd, the practitioner cannot give time to make frequent visits at long distances, to watch and guide the case, without which constant supervision all operative interference in cases of club-foot is worse than useless, for it inflicts pain and discomfort on the patient, raises the hopes of

parents and friends, and ends in sad disappointment to them, and in casting a slur on the surgical art. The reason of this failure is frequently due to the parents or guardians of the patient. The medical man is generally anxious for the welfare of his client, and chary of his own reputation; but no matter how careful he may be in iterating and re-iterating his directions, the parents too often think that when "the operation" is performed, all is done, and nothing more required.

To obviate this annoyance, I have adopted the following plan, and have generally found it succeed. Instead of charging for the operation and leaving further charges for after advice or secondary operative proceedings, to be made as the occasion arises, I make a full charge to cover operation and after treatment. In this manner the patient, parent or guardian has a monetary reason for paying attention to the after treatment, and is not deterred by the fear of incurring fresh expenses.

With these prefatory remarks, I shall proceed to give an account of the following case. Miss G. suffered from congenital talipes of the most common kind, viz., equino-varus, both feet being similarly affected. The deformity was discovered early, and when yet an infant she was operated upon twice, but the after treatment being neglected, no good resulted, and the parents seem to have concluded nothing more could be done for her, as they allowed her to grow to the age of sixteen without seeking further relief. Her own will now came into play; and tired of hobbling about on crutches, she consulted her medical attendant, Dr. Reid, of Bowmanville, who kindly directed her to consult me, which she did in the month of June, 1871. Having carefully examined her case, and got casts taken of both feet, I charged her a fee, and informed her she would have to be under my care, and obey my directions, for three years,—a long period it may seem to those unacquainted with the subject,—but when her age, the great distorsion, the consolidation of the bones, &c., are taken into consideration, I could not expect satisfaction sooner. The sequel shows I was right.

At this time both feet were turned inwards, the soles of each looking backwards whilst she walked, or hobbled, with the aid of crutches, on large callosities situated below and in front of the external malleoli and over the dorsum of the cuboid bones. The heels were drawn up—each tendo acillius was

on the stretch—the plantar fasciæ and short muscles of the feet contracted so that the plantar arches were greatly increased; the feet were narrowed from side to side, and their length diminished.

On measuring these casts, I find the length of the right foot, from the point of the heel to the end of the great toe, to be 6 inches, and the width of the sole at the ball of the great toe, $2\frac{1}{2}$ inches.

The same measurements of the left foot are $6\frac{1}{4}$ by $2\frac{1}{2}$ inches, and the girth round each foot, immediately above the ball, is $7\frac{1}{4}$ inches.

All arrangements having been made with Mr. Authors, the mechanic, for the manufacture of boots and instruments, I waited on my patient at her home in Bowmanville, when Dr. Reid, having kindly administered chloroform, assisted by Dr. Allison, I divided the achilles tendons, plantar fasciæ and muscles, stretched the feet as much as I could, and put them up in paste bandages, and directed her to bear as much weight on them from time to time as she could stand.

The boots having been obtained and applied, I got fresh casts taken at the end of six months, with the following gratifying results. The measurements being the same as before, gives for the

Right foot, $6\frac{1}{2}$, $3\frac{3}{8}$, and $8\frac{1}{2}$ circumference.
Left " $6\frac{1}{2}$, $3\frac{1}{2}$, and $8\frac{3}{4}$ "

Thus we see we have gained length and breadth; and in addition we find that the callosities are fast disappearing, and when the patient sits and slightly extends the knees, she can place the soles of her feet flat on the floor.

A few months after this, finding the structures still rather tense, I divided everything I thought could impede the recovery of our patient,—Dr. Reid again kindly administering chloroform,—and having ordered new boots and stronger steel supports, we persevered until the end of the second year, when I again got Casci, the Italian, of Queen street east, to take casts of the feet, and repeating the former measurements, I got the following results:

Right foot, $6\frac{3}{4}$, $3\frac{1}{2}$, 9.
Left " $7\frac{1}{4}$, $3\frac{1}{2}$, 9.

Furthermore, I have to remark that Miss G. can now walk across the floor without either crutch or stick, and can go up and down stairs with considerable ease. When she stands erect the right foot comes flat to the floor, but the left heel is still

elevated about $\frac{3}{4}$ of an inch, and both feet turn a little inwards.

The elevation of the left heel is not due to any undue contraction of the sural muscles, but to the still remaining unnatural shape of the astragalus, which I expect will be absorbed by pressure so as to allow the foot to come to a right angle with the bones of the leg; and having again had the steel apparatus strengthened, I do not in the least despair of getting the toes turned out enough for all useful purposes.

I have deemed this case, Mr. Editor, worthy of record, as showing what may be accomplished by well directed, determined and sustained effort on the part of the surgeon, especially when aided by an intelligent patient, who is anxious for a successful issue. Most surgeons, taking her age into account, and the solid state of the bones, would have declined her case; but when I remembered that an aneurism by pressure will absorb the sternum, I thought that well directed pressure might change the shape of her tarsus, and so it has.

Some surgeons have advised, and successfully practised, division of the ligamentum longum plantæ and calcaneo-scaploid ligaments in these cases. I admit I was afraid to take so bold a step as that, or division of the anterior part of the internal lateral of the ankle joint, although I believe one or other, or both of these incisions, would have assisted materially in shortening the time required to produce the good result I have obtained.

From what little experience I have had in private practice within the last few years, it seems to me that club-foot is very common in Ontario; what the hospitals may show I do not know. In one year I had 13 feet under observation; and during the last four years I have met with several cases of double Equino-varus, one Equino-valgus, one Equinus with deficiency of part of the foot, one Calcaneus, and one more curious than all, viz., Equino-varus of one foot and Equino-valgus of the other, complicated by total absence of both patellæ, congenital.

In consulting Adams on club-foot, (Jacksonian Prize) page 89, we find that out of 999 non-congenital cases, only 5 gave varus of the one and valgus of the other; and in 764 congenital cases, there were 15, (page 201 op. cit.) so that there were only 20 cases of this difference in the deformity as between the two feet out of a total of 1763 cases; and at

page 204, in describing the complications of varus, he gives one case where the patellæ could not be felt distinctly, although the author thought he could detect it.

TREATMENT OF ULCERS BY ELECTRICITY.

BY ALEXANDER MURRAY, M.D., L.R.C.S. EDIN., ETC.
NEW YORK.

Having alluded incidentally to the local treatment of ulcers by electricity,* it may not be out of place to say a few words generally in regard to the mode in which it should be employed.

Before we begin the treatment, it is well to cleanse the ulcerated surface thoroughly with warm water and soap, and dry with a piece of old linen or soft sponge. We should then apply a disk of platinum, silver, or zinc connected with the positive pole of the battery, directly to the base and sides of the ulcer, closing the circuit by an electrode previously covered with clean linen and well moistened with warm water. The electrode should be applied to the edges and around the ulcer for five or six minutes. After this, we should use for a minute or two longer both poles labile around the sore, to the extent of an inch or more, in order to modify malnutrition and stimulate the enfeebled capillary circulation, as well as to electrolyze the callous and infiltrated tissues surrounding the ulcer, and to promote absorption of the exudations.

Should a case of noma pudendi, canceroid, sloughing ulcer, etc., present itself, I use occasionally as an auxiliary with electricity, a saturated solution of chlorate of potassium, dilute nitric, sulphuric, or hydrochloric acid. I prefer, however, to use the dilute mineral acids on account of their astringent and chemical properties. I cover the bottom of the ulcer with a little lint, cotton-wool, or granulated sponge, and then wet the sponge with whatever agent the nature of the case may require, and apply the metal disk directly to the saturated material, and while I keep one electrode stationary for a few moments in the ulcer, I work the second conductor slowly around the diseased part. I maintain this mode of treatment daily for a few applications, or until the recuperative process is manifest in the ulcer.

It is unnecessary for me to give here a detailed account of the electro-chemical changes which take place at each pole when applied to ulcers, especially when using the various remedial agents mentioned. It will be sufficient for my purpose to remark, that if I wish to use a powerful diffusive agent in a nascent state, such as the chloride of zinc, chlorine, oxygen, etc., I have the immediate means at command.

By this method of treatment, and in some special cases also, the advantages of both electricity and topical medication are combined, and are in direct application to the diseased part, and thus we are furnished with reasons to expect more decided and beneficial results than could be hoped for by a single remedy.

I avoid generally, after local galvanization, all greasy applications to ulcers, and employ as a dressing a little lint, dry or wet with the solution of chlorinated soda, pure or diluted with water. Occasionally, if the ulcer is small and well filled with good, even, healthy granulations, I allow nature to take her course in forming a sound cicatrix. This is done by exposing the ulcer to the oxidizing influence of the air for a short time.

When treating ulcers by the electrolytical method, speedy and better results can be obtained by applying the galvanic current as strong as can be comfortably borne, keeping the poles close to each other for five or six minutes in and around the ulcerated part, and by having a *séance* once or twice a day until there is a decided manifestation of a healing process visible, when every third or fourth day will be sufficient for a sitting.

Should an exuberant growth of granulations spring up in the ulcer, an electrode of silver or platinum connected with the negative pole should be applied directly to the spongy mass, and the circuit closed on the adjacent parts, and then a strong battery current should be employed, but not too powerful to cause pain, until the granulations present a smooth, shrunken, and seared appearance, as if they had been slightly cauterized with a hot iron. After this effect is produced the poles should be reversed, and the *séance* finished with the positive pole in the ulcer for two or three minutes longer.

I have noticed when treating ulcers, particularly open buboes, with the negative pole by means of a metallic conductor in the sore, that the effect of

* Part of a paper on the Construction, Use, Mode of Application, etc., of the Galvanic Nipple-Shield.

the action of the pole is somewhat similar to that produced by the local use of the peroxide of hydrogen.

Fistula in ano, when free from any complication, can be successfully treated by introducing an electrode of platinum (a silver probe will answer) into the fistulous canal, and into the rectum a scoop of wood or hard rubber. The circuit should be closed by the application of a well-moistened chamois-covered disk on the neighbouring parts, and moved slowly around and over the fistulous canal, in a labile manner. The object of using the scoop when the fistula is complete, is to allow the free end of the metal electrode, when inserted in the sinus, to rest against it. By this means we can avoid causing unnecessary irritation of pain in the rectum during the application. The rectal scoop is not required when the fistula is incomplete, with the opening external. The advantages of this simple and bloodless method of operating are, that it does not need any preparatory treatment, or cause hemorrhage, inflammation, nor absence from business. The fistula neither requires dressing, nor is constipation of the bowels necessary after the operation. One application of galvanism is generally sufficient to close the abnormal canal in a few days.

The *séance* should not be longer than from eight to ten minutes, when insensibility is rendered by ether, etc. A strong battery current should be applied, using the negative pole in the sinus for five or six minutes, and then the poles should be reversed, and the positive employed in the fistula during the remainder of the sitting; or we may use an application as strong as can be comfortably borne for twenty minutes' duration without the aid of an anæsthetic.

Plated electrodes should not be used on moist or ulcerated surfaces when attached to the positive pole, unless we specially wish to form an oxide of the metal employed. With a negative connection, however, there is no objection whatever to their use.

As a rule, I would recommend generally the use of platinum or gold, and especially when *we desire ozonization*. When the positive pole is formed of any oxidizing metal, ozone is not formed, and the electrode is quickly oxidized.

Dr. Althaus has ascertained, when experimenting on the different animal tissues and fluids by elec-

trolysis, that oxygen, acids, and albumen are accumulated at the positive pole, and hydrogen and alkalis at the negative pole. These agents give the key for further scientific research.

Ozone is supposed to be an intensified or an allotropic modification of oxygen, and is one of the most powerful oxidizing agents we possess; it has a peculiar odor, which somewhat resembles weak chlorine. *Antozone* is also an active condition of oxygen; it unites with water, and is strongly oxidizing in its action. *Oxygen* is a colorless, odorless, and tasteless gas. *Chlorine* is a yellowish-green gas of a peculiar suffocating odor.

When treating a large indolent ulcer, situated on the lower extremity, by galvanism, with the positive pole in the sore, I could easily detect the odor of ozone as evolved.

This fact induced me to submit to galvanization a piece of lean raw beef, with both poles placed about half an inch from each other. I employed plates of platinum, as this metal forms the best electrode for electrolytic purposes.

At the anode (positive pole) the ozone odor emitted was manifest in a marked degree to the sense of smell, while at the cathode a fleshy odor only was perceptible.

I did not wish to trust altogether to the sense of smell; but was anxious to ascertain its presence beyond a doubt by chemical reagents. The following are the methods I employed when experimenting for ozone. I selected a portion of perfectly fresh beef, free from fat, for each test. Meat that has been kept on ice, or with the least tainted odor, should not be used; for though we may succeed with every reagent employed to-day, we could not perhaps with the same meat obtain a satisfactory result on the following day.

I submitted a portion of healthy placenta to galvanization. In a few moments the odor of ozone was perceptible in every part of my office, and at the same time I noticed that there was also a large quantity of hydrogen evolved at the negative pole, with occasional mimic explosions beneath the disk, scattering a bloody froth in all directions. The free elimination of both hydrogen and ozone in this instance was to me remarkable, and was in quantity about five or six times as much as I could obtain from a piece of beef of the same size.

The large quantity of oxygen contained in the placenta is evidently intended for the special purpose of further oxygenation of the maternal blood

while passing through the placenta to the infant. When ozone is, specially prepared, and in its purity, we meet with no difficulties when testing. But with the methods I have adopted a few extraneous agents are developed at the same time with ozone by the electrolytic action of the positive pole. These substances would necessarily interfere more or less with the character of the tests employed; while the small quantity of ozone sometimes evolved would not be sufficient to characterize satisfactorily a few of the tests; as, for instance, with indigo, a very weak solution should be employed.

The instrument I used when experimenting was a zinc carbon battery of thirty-two cells, manufactured by the Galvano-Faradic Company.

METHOD I.—After electrolyzation of the beef, and the removal of the metal conductors, I laid a piece of white bibulous paper, previously impregnated with a solution of iodide of potassium, and then pressed the paper gently with porcelain buttons against the electrolyzed portions of the meat for a few moments, when a brown stain was produced on the paper, oxidizing the potassium and setting the iodine free. By this method of testing I found a few agents satisfactory, while others gave only a faint indication of ozone.

METHOD II.—Upon a glass plate I placed a piece of bibulous paper saturated with a reagent, and over the paper a thin slice or shaving of raw beef, lastly the platinum plates. I then employed a strong galvanic current for a few minutes. I expected by this method that as soon as the ozone was evolved, and from its diffusive character, a sufficient portion would at least penetrate the meat, and come in contact with the prepared test-paper. Most of the tests employed by this mode of experimenting gave satisfactory results.

METHOD III.—On a piece of raw beef I applied a strip of thick white blotting-paper (about one-third the width of the conductor), and over it the metal disks. I had my tests, etc., at hand, and as soon as the ozone odor was developed I removed the conductors and immediately brushed the surface of the paper, which had been allowed to remain on the meat, with a test solution. By this proceeding the blotting-paper was impregnated with ozone sufficient to characterize satisfactorily whatever test I chose to employ.

In treating ulcers I have also applied the above method of testing.

METHOD IV.—I placed a piece of beef on the bottom of a small glass jar, and over it the metal disks, and securely covering the vessel, allowed only the wires of the conductors to be exposed outside, to form the connections with the battery. The test-papers were suspended from the inside of the cover, directly over the electrodes. This method gave very unsatisfactory results.

"Necessity is the mother of invention." I may not have employed the most scientific method of ascertaining the presence of this odoriferous agent; however, such as it is, I am convinced of one fact, that I have discovered that ozone is evolved by the electrolytic action of the positive pole when applied directly to ulcers. I feel assured in saying of this discovery that it will have a very important and practical bearing, and aid us also to arrive at a more definite and scientific basis, as to which pole we should employ directly in the treatment of diseases by electrolysis. I find no reference whatever regarding its use or mode of application in any work on electro-therapeutics which I have consulted. I am aware that ozone is derived by the action of the ordinary electrical machine, and evolved when we strike together the metal conductors of a galvanic battery in operation, by chemical action, etc.

Galvanism, when employed in the treatment of ulcers, possesses many important and decided advantages which are wanting in the usual local remedies daily in use. It is easily applied, and by no means a painful remedy. Its action is various, that is to say, it is electrolytic, catalytic, and thermal.

The elements evolved by the decomposing power of the positive pole, especially when the conductor is formed of an unoxidizable metal, and applied directly to the ulcer, possess the following properties: stimulant, antiseptic, disinfectant, de-odorizing, oxidizing, besides possessing the power of coagulating blood and albumen, as well as promoting absorption of the abnormal secretions.

It matters little in the surgical treatment of ulcer what the nature of the agent or agents may be their action when developed by electrolysis, or whether its beneficial effects are due more to the primary or secondary chemical results which occur in the ulcer during the application; it is sufficient for our purpose when we have the practical fact, that ulcers heal rapidly after its application, generally in about one-sixth the time ordinarily consumed by the usual methods of treatment,

The flabby livid-colored granulations which are

usually found in indolent ulcers, after one or two applications of galvanism, are soon changed to a healthy flesh or rose color.

To this method of treatment I would give the name *Galvano-ozonization*, a term which fully characterizes its nature.

I am sanguine enough to believe that we have no single remedy or mode of treatment with which I am acquainted during the thirty years I have been engaged in practice, which can be compared to the *galvano-ozonic method* when properly applied to ulcers. The latter usually heal in one, two, or three weeks, when by other methods they generally take as many months or more to accomplish.

This form of application does not interfere with any other kind of treatment, local or constitutional, but, on the contrary, allows us to use whatever means the case may require.

Of the electrolytical treatment of malignant ulcers I cannot say as much as regards galvanization alone. My experience of this class of diseases is too limited to give a decided opinion. Of one fact, however, I am certain, it will have a soothing effect, so as to relieve acute pain, and aid considerably whatever local or constitutional treatment may be employed. But this is effected through the direct application of the positive pole. The negative pole will in some special cases occasionally cause the ulcerated surface to slough or spread. Nevertheless, we may use both poles in the ulcer at the same time, or the negative first and the positive pole the last.

The thermal effect of galvanism can be easily ascertained by submitting a piece of cooked fresh beef for a few minutes to a tolerably strong galvanic current, and after the removal of the metal conductors, the portions of the meat which had been electrolyzed will be found heated to such a degree as to be almost impossible to hold in the hand, even for a few moments. The heat developed on raw beef is not so manifest, owing to the large quantity of moisture in the tissues.

Localized faradization, when employed in the treatment of ulcers, affords very unsatisfactory results. This is no doubt due to the feeble electrolytic action of the induced current.

With the change of temperature and the adoption of urgent sanitary precautions, the cases of cholera in Rome, Berlin, and other cities on the Continent have considerably diminished during the past month.

CHARLATANISM.

BY GEORGE GRENIER, M.D.

Translated from *L'Union Medicale du Canada*, by Thos. R. Dupius, M.D., etc., Kingston.

For several years past persons throughout the whole country, and also in our Province of Quebec, have exerted themselves to a considerable extent in searching for means to diminish those contagious diseases, and others, that decimate the population, and which a stricter attention to the laws of hygiene might be able to cause in part to disappear. It is truly a laudable enterprise, and one which shall always in the future, as it has in the past, receive our active co-operation.

But there is a scourge, probably more formidable than the passing visit of these epidemics which come to scatter death amongst us, against which we have not yet the knowledge to oppose an effectual barrier—it is *charlatanism*.

The destructive tide, swollen by popular credulity, rolls on incessantly, submerging a great number of dupes, and bearing away in its passage an incalculable multitude of victims.

Did physicians consult only their own interests, they would let it alone, as they are sure to be called, sooner or later, to remedy the evils produced by *medical impostors*. But being, for this very reason, in a position to note the numbers of victims which these various kinds of deceivers make in society, both duty and humanity demand of them that they should enlighten the public, and warn and admonish them against the dangers to which they so thoughtlessly expose themselves.

We shall not here speak of those remedies with pompous titles, which are paraded on the fourth page of newspapers, and which chemical analysis demonstrates to be, in most cases, nothing but vile compounds, liable at best, to render disease incurable, by permitting it to take root in the animal economy, even when they do not themselves destroy the health of the individual by their drastic or other properties. We hardly dare to mention those shameful advertisements (which we blush to see in the columns of journals edited and published by French Canadians who call themselves catholics) which plainly instruct females in the knowledge of preventing nature from completing her work; conduct which we could wish to be able to brand as it deserves. We would not exhibit the sorrowful spec-

tacle which is presented to us by American society, where the number of women who conceal their faults, by crimes, and of the *quacks* who make themselves accomplices in homicide, (for happily for the honor of our profession, there as elsewhere, the true physicians who allow themselves to be guilty of this crime are rare,) are so great that the original population of New England is daily decreasing; but all who have at heart the health, the honor of our people, and public morality, know these facts, or ought to know them, and take means to prevent the extension among us of so grave a crime.

There is a host of other forms which quackery assumes which are none the less prejudicial to society, and against which it is necessary to admonish the public.

Bone-setters, makers of miraculous ointments, those who make a speciality of uterine diseases, and even curers of consumption, are plentiful amongst us, without enumerating those who heal by supernatural gifts, or because they have had the signal privilege of being born the seventh son.

All this class of gentry, in fine, whose impudence and knavery, are only equalled by their ignorance, are by various means deceiving a credulous public which is incapable of judging real worth, or of appreciating true knowledge.

These persons, ignorant of the laws of *human* organism, and of the different forms under which the same malady shows itself, in consequence of the influences of age, sex, constitution, and other causes, attack all diseases with the same remedy.

Father Ancé, an excommunicated priest, who recommended his ointment only externally, is distanced by Mercier, an old *porc-butcher* of Montreal, who after having made the most profound anatomical studies on the genus "*porci*," produced an ointment which is as useful internally as externally, and which he has induced many of his idle dupes to swallow. Others distinguished by the name of bone-setters, are called in cases of accidents and leave a great many of their unfortunate victims cripples for life; and still others, pretending to be endowed with supernatural gifts, and joining indecency to irreligion, venture to insinuate themselves into families, and even dare to make a mockery of the prayers of the church; and, finally, a crowd of impostors of the same calibre are seeking to obtain public favor by various artifices, all calculated to dazzle and deceive.

Another class of travelling physicians come into the country and draw the money out of the poor, and then pass on to dispense their gifts elsewhere. To this number belong those individuals who go travelling about through our cities and country in splendid equipages, clothed in the habiliments of indians or harlequins, crying up the virtues of "Lightning oil," or "Good Samaritan remedy," and after a stupid discourse addressed to the loafers around, humming out the refrain,

"Dans un moment, dans un instant,
Je fais passer le mal de dent."

Those who cannot be fascinated by these gaudy turnouts, and who would blush to place confidence in these shameless knaves, are in their turn captured by another, and still more dangerous class of *quacks*, who to the impudence of the charlatan, add the pretensions and manners of men of education. These latter make their dupes in the higher classes of society, even among the dignitaries of church and state.

Who has not witnessed during his career the infatuation begotten in certain classes by this species of quacks? Who has not seen persons of position, and otherwise entitled to respect, allow themselves to become the echo of these *renowned* strangers, at the expense of truth and good sense?

We have the distinguished honor in Montreal, of possessing at the present time one of these beings who speculates on the credulity of the instructed classes.

Armed with all sorts of needles, and an alcoholic prescription of cognac brandy, he goes about pricking the skins of his victims to draw out of them *their money and their bad blood together*.

This *eating worm** (if we pull off his scientific mask) requires a partner to experiment with a miraculous remedy, which he claims to possess by inheritance, a remedy which cannot fail to apply itself to the disease, as it, like the mithridate of former times, contains forty ingredients.

It is always an object of astonishment to see men who have received a superior education placing confidence in strangers, of the merits of whom they are incapable of judging. By reflecting on this, however, it may be, at least, partly explained by the constitution of man himself, who is endowed by his Creator with the desire of self-preservation.

* Worms, is the name of a so-called medico now in Montreal, practising the system of Carl Bauscheidt, called "Bauscheidtism," which is a species of electro-puncture, by which he (Worms) professes to purify the blood.

Selfishness, considered in the sense of a man's exercising all his powers for the prolongation of his existence, is a necessary principle, and one which obliges him to make continual efforts to obtain this end. But it is precisely the force of this principle that makes him unreasonable in his actions respecting his health.

Capable of showing great powers of logic on other subjects, he cannot, in this, distinguish the true from the false, but allows himself to be misled by the first that comes up, when he depends upon his own judgment. It is from this that homœopathy and other illusory systems of medicine, have gained their strength, during a length of time, to deceive a great many well-meaning minds: and it is from the same principle that physicians themselves become such poor judges of the treatment that is proper in their own ailments.

Now add to this the promise of an easy and speedy cure, all of which flatter man's opinions, tastes, and desires, whilst the conscientious physician, in certain cases, can promise only an uncertain cure, after long and painful privations, and you will have the secret of the reputation of many empirics.

It is for this reason that the honest minded physician, who has spent long years in preliminary studies, who has sacrificed the brightest days of his youth to constant and laborious application, to render himself qualified at last to relieve the infirmities and suffering of humanity, who has worked and ruined his health in infected rooms during many tedious evenings, to acquaint himself with the mechanism of the functions of the human body, and the causes that may interfere with their operations, who after having studied the observations of the greatest minds from the most remote period to the present time, has, himself, in thousands of cases in hospitals, followed the march of diseases—it is for this reason, we say, that such a one is oftentimes obliged to contend with the prestige of men without instruction, without talents, who do not know the simplest principles of human organization, and whose impudence is their only recommendation; or when knavery serves them in place of instruction by which to deceive the public, and deprive him (the honest physician) of the confidence which they do not, nor ever can, deserve. Is it then impossible to effectually protect society against these impostors of various kinds, who speculate on the failings of humanity? Does there not exist

some means of curing, in part at least, the hideous plague—quackery—which is destroying our profession? Yes there is, and in our next article we will show that if we believe in the dignity of our profession, if we would shake off our apathy, and unite ourselves as one man to secure legislation sufficient to assure society of protection, we would find an efficacious remedy for this frightful plague, though it were needful to make application of the *hot iron*.

NITRITE OF AMYL IN THE TREATMENT OF SPASMODIC ASTHMA AND ACUTE BRONCHITIS.

BY DANIEL H. KITCHEN, M.D., ASSISTANT PHYSICIAN OF THE NEW YORK STATE LUNATIC ASYLUM.

[From the *American Journal of Insanity*, for October, 1873.]

The very name of this drug suggests to the reader a remedy of recent origin. Some have used it with moderate success in the treatment of epilepsy and kindred nervous diseases. So far as we have been able to ascertain, it has been employed but little by the profession, in spasmodic troubles, as we find but one case of asthma reported in which nitrite of amyl has been used. We well know how apt one is to put forth a theory, or advance a hobby, often greatly at variance with truth, after full investigation. We shall here present, however, only a few cases, in the hope that at some future day we may be able to give details of experiments and experience with this drug.

In speaking of spasmodic asthma, it may be well to present the main points of the disease. Dr. Forbes some years since, first recognized and described it as a disease *per se*. Some modern writers doubt the very existence of nervous or spasmodic asthma; for instance, Dr. Clutterbuck in an able and interesting lecture on clinical medicine, says, in substance, it is desirable to inquire how far the term spasm is really applicable to affections of the respiratory organs, or to what extent the respiratory muscles are concerned in certain cases of dyspnoea, for it is to muscular structures only that spasm can be referred.

The only muscles found in the course of the air tubes are those of the larynx; but these have no share in producing asthma. Muscular contractility could serve no useful purpose, as far as we can

judge; but, on the contrary, it could only be exerted to the detriment of the function concerned.

It seems, therefore, unreasonable to infer the existence of spasm at this part, in order to account for the asthmatic paroxysm. To an anatomist it is plain that we may have spasm of the trachea, because the rings are incomplete, forming only about two-thirds of the circle. This provision was intended to allow the trachea to increase and diminish in size with respiration. Asthma is a nervous disease and subject to variations. The suddenness with which the attacks are ushered in is somewhat remarkable. The patient may be sitting quietly, and suddenly be attacked with difficult respiration and marked wheezing, which may continue for several hours. Usually the paroxysm abates after vomiting a copious discharge of sputa; on examining the chest during the height of an attack we hear distinct bronchial rales, both dry and moist: percussion does not reveal any variation from the normal chest sounds.

The appearance of the patient is very characteristic when the paroxysm is fully developed. He is usually pale, the position is fixed, the shoulders raised, the body bent forward, and the sweat pours off the face, from the violence of the respiratory efforts.

In one of our cases the paroxysm was so intense that the patient had to sit up half the night, and could not lie down without producing symptoms of asphyxia; at times there was marked lividity of the lips and face, gasping, loud and prolonged wheezing, with congestion of the face and neck. This condition was frequently repeated.

The age at which patients are usually attacked with asthma is such that prompt treatment is imperative.

In the treatment of this disease two things are to be considered: First—to relieve the paroxysm. Second—to prevent its recurrence.

The treatment heretofore has been stramonium; by first exhausting the air from the lungs, then rapidly inhaling the smoke. Belladonna, chloroform and fumes of nitrate of potash have also been used, each with some degree of success. Dr. Wood has shown in his valuable experiments on animals that nitrite of amyl is almost a universal sedative, acting markedly on the muscular fibre through the motor nerves.

The physiological effects produced in a few sec-

onds after inhaling from five to ten or fifteen drops of the nitrite of amyl, are flushing of both cheeks, suffusion and redness of the eyes, giddiness, numbness and coldness of the hands, seeming loss of power to articulate, increased heat, pulse rapid and small, sometimes nearly doubled.

These effects soon disappear and the pulse falls below its normal condition, the skin which was moist and covered with perspiration becomes dry, the capillaries of the eye contract, the dizziness passing away among the last of the effects. There can be no doubt but that the inhalation of nitrite of amyl causes diminished blood pressure. Sensation or consciousness are not abolished by its use, therefore it cannot be properly called an anaesthetic, as some writers have asserted, and no drowsiness follows. It would seem that the nitrite of amyl reduces blood pressure by its action on the capillaries; the first symptom we have spoken of, the flushing of the face, shows plainly enough its direct action on the capillary system. After the application of the salt to the web of a frog's foot dilatation of the capillaries is perceptible for a few seconds and contraction immediately follows.

In asthma the benefit derived from nitrite of amyl is due to its paralyzing power over the capillary vessels of the trachea, larynx, &c.

In acute bronchitis we have almost invariably a congestion of the fauces, and the whole respiratory tract, which produces irritation and causes coughing, and nothing can be more annoying both to the patient and his friends. Now if nitrite of amyl acts on the capillary system as described, then its use in this affection must prove advantageous.

In cutting short attacks of spasmodic asthma, and in the treatment of acute bronchitis, we have found nitrite of amyl more efficacious than any of the ordinary medicines heretofore used.

As nitrite of amyl is exceedingly volatile and care is required in its use, it is best applied by dropping it into a small cup sponge, and applying immediately to the nose, the mouth being kept shut.

Our first experiments with less than five drops, were utterly nugatory, being insufficient to make the necessary physiological impression.

We now give a few cases illustrating its effect:

CASE I. Woman, aged fifty, widow. Patient usually had good general health. Has had spasmodic asthma for ten years. The paroxysms usu-

ally came on in the forenoon and lasted about two hours ; during all this time respiration was very labored, face and lips purple. She had used the various remedies recommended for asthma, with little or no good. A pill of extract of stramonium and belladonna seemed to afford slight temporary relief. During one of the paroxysms we gave her six drops of the nitrite of amyl, by inhalation, with marked beneficial results. This paroxysm lasted only half an hour. She had a paroxysm later in the same day, in which we prescribed ten drops inhaled from a sponge ; the full physiological effects were almost immediately observed, and speedy relief followed ; the paroxysm lasted less than ten minutes from the time the nitrite of amyl was administered.

CASE II. Woman, aged forty, married. Patient is nervous and hysterical ; usually enjoyed fair general health, with the exception of suffering more or less from some dyspnoea and dyspeptic symptoms. With the variableness of the weather she took cold, and following sneezing, &c., came asthma. The cough aggravated the dyspnoea ; the shortness of breath, the deep sense of suffocation and wheezing, the oppression and constriction of the chest were so severe that they threatened immediate destruction. She was thoroughly accustomed to many similar attacks, and patiently awaited any result. She had been in the habit of smoking equal parts of tobacco and stramonium leaves, with some temporary relief. When we first prescribed for her we used the steam atomizer, causing her to inhale the steam from carbolic acid, tolu and chlorate of potash. For two or three times this seemed to work well, but its effect was soon lost on the patient, and the paroxysms were as severe as ever. Her attacks lasted usually from six to ten hours. During the midst of one of these we gave her six drops by inhalation, of nitrite of amyl, and after waiting a few minutes, the dyspnoea began to subside. We gave nitrite of amyl to this patient six times, in doses varying from six to fifteen drops, and when administered in the latter dose, rapid and satisfactory relief followed. This patient had consulted a number of doctors and used drugs largely ; she expressed herself as never before having had any satisfactory relief, and said she would always feel grateful to the man who originated nitrite of amyl.

CASE III. Woman, aged twenty, single. In the

latter part of September had an attack of acute bronchitis, with severe paroxysms of coughing and sneezing. During each of these attacks, the dyspnoea was well marked ; the face, lips and eyes were intensely congested ; ordinary expectorants were prescribed for the bronchitis, and inhalation of ten drops of the nitrite of amyl for the cough. This proved effectual and cut short the cough and afforded much relief to the patient.

CASE IV. Woman, aged twenty-five, single. In the early part of September last had an attack of bronchitis of the smaller tubes, with fever and catarrh. She had frequent periods of coughing which always produced intense headache and general constitutional disturbance. Nitrite of amyl was given in eight drop doses by inhalation, during the paroxysm of coughing : in less than five minutes all the congestion of the face and eyes had subsided and the dyspnoea disappeared. In this case occasion required it to be used only twice.

We have similar cases of asthma and bronchitis, in which the same marked benefit has been experienced ; the similarity is so great that it is unnecessary to report them.

Correspondence.

THE PROPOSED CONSOLIDATED MEDICAL ACT.

(To the Editor of the *Lancet*.)

SIR,—The profession owe you a debt of gratitude for publishing in the preceding number of the *Lancet* a full draft of the proposed amendments to the Medical Act. When the Bill is laid before Parliament, as it shortly shall, it will not be in the mouth of any one to say that the measure was sprung upon the profession, as some asserted was the case last session.

While not fully concurring in all the provisions of the Bill as proposed last session, yet, owing to its merits as a whole, and the benefits likely to accrue to the profession from its enactment, I cheerfully waived my little objections, and used what little influence I possessed to secure its passage. I am happy to say that the measure as now proposed meets with my entire approval, and for the sake of the profession and the public good, I hope it will meet with general favor and support.

The provision most objected to in the former draft, was that which made non-payment of the assessment punishable by forfeiture of licence. Very few of the profession, I think, were in favor of that clause, while many strongly objected to it. That clause has been wisely expunged, and the measure is no longer objectionable on that ground.

The assessment clause, however, is retained, and that was the next most objectionable feature—in fact the only other ground of opposition to the measure as proposed last session. The Council having met the opponents of the Bill half way, I submit that opposition should cease. It is absurd to suppose that a law can be framed to meet the views of everybody. The thing is impossible. All important legislation is based on compromises, and to refuse to listen to the voice of conciliation is to defeat legislation altogether. Surely no one having the interests of the profession at heart could carry his personal objections to lengths so disastrous.

It is well to remember, however, that a few of our number opposed the assessment clause last session, and there is danger of their doing so again, even, I am sorry to say, though it jeopardize the whole measure. For my own part, I have been strongly in favor of this provision from the first, because I conceived it to be founded on justice. The law, as it stands at present, was enacted more in the interest of the practitioner than the student, and that being the case, I considered it unfair that we should use our position to throw the whole burden of the working of the law on the poor and struggling student. We impose upon him a long and expensive course of study, very properly I admit, and when at last he knocks at our door and asks to be admitted to the rights and privileges of a duly qualified practitioner, we make a further demand, and ask him to pay the wages of the door-keeper: This, I am well aware, is a time-honored custom, but, like a good many other time-honored customs, it is one that is based on injustice. The Bill, however, perpetuates that custom, with all its injustice, at least to a very great extent, and only asks that those most benefitted, bear the merest fraction of the burden—as it were for shame's sake. How any practitioner can fail to see the many advantages the proposed Act would confer, I am at a loss to understand; and seeing these, how any honest minded man could find it in his heart to refuse the small sum asked for, I am also at a loss to

understand. All who believe in Medical legislature should come forward and strengthen the hands of the Council, and by every lawful means aid them in securing the enactment of the best Medical law ever submitted to any legislature in this or any other country. It will at once protect the public against impostors and secure to the profession all the rights and privileges to which they can lay reasonable claims. Surely such a boon is cheap at two dollars a year!

But some make it a matter of principle; a matter of dignity; and such like—I reply, the age for such twaddle is past, and has been succeeded by more practical and common-sense views. The law has always been esteemed a profession at least as honorable as ours, and its members are usually noted for lofty notions in regard to themselves, and the peculiar *dignity* of their profession, yet even lawyers find it necessary to tax themselves in order to uphold that self-same "dignity," and accordingly we find them contributing twenty dollars per annum to a general fund. They are lawyers, and yet they appear never to have entertained the notion that such taxation took away "their rights as British subjects;" they are scrupulously *dignified*, yet it never has occurred to them that they have been degraded by such taxation. No; such discoveries are far beyond the mental range of lawyers, and to doctors alone belong the capacity of mind necessary to unearth such deep mysteries, and make them known to the rest of mankind. I may add that the druggists, and I believe the dentists, pay a yearly sum to maintain their respective corporate rights. They too seem to be still freemen, and are well pleased with the position to which they have attained through judicious legislation.

So far I have addressed myself to those who are in favor of legislation, but who insist that the law must, in every particular, coincide with their views, even if they be but a small minority of the profession. (Such persons would make bad republicans.) Besides these well meaning, but troublesome persons, we have to contend with a small band of "free-traders"—men who are opposed to all legislation of a medical character. I am happy to know these are few in number and uninfluential, having no following among the people nor friends in parliament. It is a matter of rejoicing that our people are too well informed and our legislature too enlightened ever to allow ideas so inimical to the public good

to become dominant. A short sojourn in the "land of the free" would prove "an effectual cure" for all who hold such views. To be a doctor there only requires the payment of an annual licence; no questions as to fitness being asked. The companionship into which such a system would necessarily involve them, would soon disgust them with their free trade views, and would, ever after, make them ultra advocates of wholesome legislation. "A good when lost is valued most." Our American friends would gladly go back to the "good old times," but their portals are too widely open to admit of easy closure, and, as a consequence, our brethren across the borders have to submit to "indignities" which find no parallel in a two-dollar assessment, nor in any of the many wrongs which some seem to think they are made to endure in this country. Instead of grumbling and quarrelling, we should be contented and united, joining together in one loud song of thankfulness for the many immunities and privileges which our profession enjoys under the benign influence of an enlightened government.

A word about the Medical Council may not be out of place here. It would be well if the general profession would always bear in mind that that body is not self-created, but, on the contrary, is the creation of the will of the whole profession, and acting in obedience to certain laws and regulations. To accuse the Medical Council of "despotism" is therefore absurd. We should remember too that any act of the Council applies to its individual members with equal force with those who are not members of that body: therefore if the Council by its acts commits a wrong against an ordinary member of the profession, it also commits a wrong against each of its individual members. This railing at the Medical Council, as such, is to my mind most unreasonable.

At the risk of being tedious, I must say a word about the contemplated stampede of Dr. Campbell, and his too faithful followers, anent which, Mr. Editor, you have something to say in the current number of your Journal. If the Homœopaths had the courage to throw Dr. Campbell overboard their troubles would soon be at an end. The ambition of one man has often destroyed a nation, and in this case, the ambition of one man has prevented the harmonious working of the Council, and now threatens its disruption. It will be well for the Council to keep a tight rein, and see that this

movement does not cut the ground from beneath their feet. Let the wedge be once entered and it is hard to say what may happen. The law, as it stands, has prevented hundreds of incompetents from gaining admission to our ranks, and any relaxing of the law ought to be regarded with suspicion. You, Mr. Editor, suggest that if the Council has in its hands the primary education and preliminary examinations of students that we are safe, and the final examination and the power to license may be left with the various bodies, and I suppose schools. That looks very well at first sight and would appear to be an easy way of overcoming the difficulty, and at the same time lessening both the duties and expenses of the Medical Council. But does it not seem strange that we should think of going back, even in part, to the old system, at a moment when the profession everywhere is clamoring for a uniform system of examination, under a corporate board? Make that concession to Dr. Campbell, who, by the way, seems to embody in himself all of Homeopathy that has animation in Canada,—if you can do no better, but in all other respects let us hold fast to the advantages which we possess. This is a time calling for calm consideration and wise counsels. I hope the sentinels are already on the walls, and that those in whose hands we have placed the honor and welfare of the profession, will prove faithful in the discharge of the duties which their stations impose upon them. That their hands may be strengthened, let the conduct of every medical man in Ontario, who wishes well for the profession, be marked by moderation, combined with firmness, and good, most assuredly, will be the result.

Yours truly,

A. MACKINNON.

Stratford, October, 1873.

PEPSIN.

(To the Editor of the Lancet.)

SIR,—In your August number I notice an article under this head, alluding to a new method of preparing it, by the process given by Mr. Scheffer, of Louisville, Ky., in itself sufficiently simple, but which I cannot accept as a discovery of value, in absence of evidence touching the physiological power of the product.

I have for nearly two years' been in the habit of

experimenting on the stomach of the pig, and succeeded in extracting a preparation of considerable power, possessing solvent virtues on albuminous substances plainly appreciable. The plan recommended by Pearson of London for the production of "*Pepsina porci*," and the elaborate process of Brande, seem to give results of no great divergence, both being based, in my opinion, upon a theory which recognizes the true nature of pepsin and its chemical relations to organic life.

In either case, an ordinary dose dissolves a notable quantity of coagulated albumen, with the aid of an ordinary acid.

In preparing pepsin by any given method, one error may easily be avoided, viz.,—to subject the muscular, peritoneal, and vascular substance, along with the mucous membrane, to a chemical process, and to expect therefrom a corresponding amount of pepsin. In the fresh stomach the lining membrane may be readily detached, and this constitutes every thing of value in making pepsin, including as it does all the glandular apparatus involved in the secretion of Gastric juice.

It is then difficult to understand how an amount of pepsin verging upon an ounce can be manufactured from a quantity of raw material, which when moderately dried, weighs but a few drachms.

The *scam* spoken of as crowning the result of the new process, may be *muosine*, *creatine*, *creatinine*, or a mixture of the three with other vague organic products, but certainly contains an infinitesimal measure of pepsine, which, when further attenuated by a goodly quantity of lactose, makes the preparation as a therapeutical agent utterly valueless.

A sample which will not dissolve the coagulated white of egg, *out* of the stomach, cannot be expected to perform wonders when taken *into* the stomach. I can assure your readers that no chemical process, however ingenious can succeed in evolving but a small amount of pepsin from a single stomach. Almost every physician recognizes the valuable assistance derived from an efficient gastric solvent and it is not too much to expect that each should be able to provide such an article for himself, considering the abundance of raw material every where available; but assuredly a pretended discovery that does not recognise a specific solvent virtue as an essential factor in estimating its value, cannot but be a nismomer, and therefore more liable to mislead than to instruct.

The remarks you make as to the worthlessness of samples in the market are unfortunately too true. Houghton's I have found as good as many others, and generally prescribed it, from its comparatively low cost, until I succeeded in manufacturing an article five times the strength at a merely nominal cost.

Boudault's, —with all its vaunted power, and enormous price, —is no better than Houghton's. A gramme is the ordinary dose of the French preparation—but any one who has prescribed it, will agree with me in stating that a drachm may be exhibited with perfect impunity.

In a future number I shall take occasion to mention a tolerably simple and efficient process, which any one can follow, and by which an unquestionable sample can be produced. The class of subjects and cases upon which pepsin exhibits an almost marvellous power, will also be pointed out, as they have occurred in my experience.

Thanking you for the space I occupy,

I remain, yours,

W. M. McGEACHY, M.D.

(To the Editor of the LANCET)

SIR,—Perhaps your readers may not be aware that there is a term used by their professional confrères on the other side of the lines, to wit:—namely, "that this is a progressive age." To me it is a solemn fact. I lately received from a well known firm in the States, a puff written by a medical man in Ohio in behalf of the virtues of some wonderful preparation.

The composition of its name, so far as I can make out, amounts to at least nine syllables, with three hyphens judiciously interspersed, forming one of the most gorgebus displays of chemical incompatibility I have ever had the pleasure to meet with in the whole course of my professional career.

My Ohian professional brother, in the first instance, is of course æsthetical, and proceeds to lay down the rule that any one who does not write articles laudatory of every medicine that shrewd commercial men direct his attention to, is a "prurient prude."

What a *prurient prude* is, or may be, I can say, but it strikes my low style of intellect that it is either an impossibility or a contradiction of terms

The polyglot remedy cures among other diseases those who suffer from prurigo, caused, as my Ohian

friend puts it, from "eating freely of Polygala (*sic*) Fagophyrum cakes swimming in Darwin's nectar.

How, doctor, can you manage such a man, who would warn your patients not to indulge in Polygala Fagophyrum cake swimming in the nectar of Darwin? Ohian patients, it seems, are recalcitrant, and will, as our first parents did, indulge in forbidden luxuries, but the Ohian physician, with the polyglottic remedy, affords the only cure.

I believe that Polygonum Fagophyrum, or P. Esculentum (not Polygala), are botanical names for the humble buckwheat; the nectar of Darwin I know not of, but I should imagine the writer to be a good illustration of the earliest specimen of protoplasm.

The "fat old gentleman," martyr to lichen, or the "seven years' itch," who informed my Ohian disciple of Hippocrates, that he suffered for "seven years to a day," merits our deepest sympathy and is worthy of our profoundest commiseration.

It is after all sad and humiliating to think that in a profession like ours, commercial men find it pays to employ professional idiots to vaunt their wares, implying as it does, the low standard we, as a profession are judged by what are termed smart business men.

Yours truly,

ALPHA.

October 16th, 1873.

[The preparation above referred to is the so called Iodo-Bromide Calcium Comp., prepared by Messrs. Tilden & Co., New York. The following are some extracts from the paper referred to which first appeared in the *Cincinnati Lancet and Observer*, by J. R. Black, M.D., Newark, Ohio.]—Ed.

"At the outset allow me to say that what I have written, and wish to write, is not from any desire to puff either this house or any of its preparations. To do this I have no sort of motive, but, on the contrary, the heartiest dislike. But when a physician feels himself a debtor to any one for putting a convenient and excellent remedy into his hands, it would certainly be playing the part of a professionally 'prudent prude,' not to feel himself free to make candid acknowledgement of the fact."

The therapeutical properties of this compound have proved, in my hands, to be alterative, laxative, resolvent, and, in a minor degree, tonic. In the epidemic, which recently passed over the country, of influenza—popularly known as the epizootic—one of its most common sequelae in strumous subjects was an enlargement of the cervical glands. This I found to disappear in the most satisfactory manner under the use of the Iodo-Bromide Calcium Compound. In fact, it seems to have, as its composition would indicate, a special effect on the glandular structures of the neck. Chronic irritation of the pharynx, and recent enlargements of the tonsils, are also promptly benefitted by its use.

In some cutaneous diseases it is one of the most valuable

of our preparations. In prurigo, its beneficial action is no less apparent. This affection, as all know, is often very obstinate, and a not uncommon effect of eating freely of Polygala Fagophyrum cakes, swimming in Darwin's nectar. It is an annoying, disagreeable, and very troublesome affliction. It is often as obstinate as lichen, which is so obstinate as to have received the name of seven-year itch—a disease which a fat old gentleman once assured me he had had seven years to a day.

DOMINION ACT FOR REGISTRATION OF DEATHS—AN AID TO THE PROGRESS OF SANITARY SCIENCE.

(To the Editor of the Lancet.)

SIR.—Dr. Botsford in his address delivered before the Canadian Medical Association at its annual August meeting very correctly urges, that in order to establish a thorough system of Hygiene, the foundation must be laid by a careful registration of deaths that occur, and this to be exacted by a government system, general in its operation, and embracing the whole population of the Dominion. In illustration of the perfection of such a system in Great Britain, Dr. B. quotes a paragraph from a speech of Dr. Acland at a late meeting of the Social Science Congress to this effect. "We must find out a way of getting at the precise data of mortality; the rate of life in all civilized portions of the world, and such has been the astonishing success, that the Registrar general was actually able to tell us at breakfast once a week how the people are getting on, not only in Oxford, London, Manchester, and so forth, but he told us also of New York, Vienna, St. Petersburg, of Bombay, and of Bengal."

This advance towards perfect registration, and in a measure to the prevention of disease has been accomplished only after years of patient labour by the illuminati of Europe, and much yet remains to be done to determine, by the application of statistics, various points of interest in reference to the nature, sources, and complication of diseases.

As yet, little assistance has been rendered in this great work by the profession in Canada, and that little performed in a perfunctory manner is of but trifling avail, in consequence of there being no such functionary as Mr. Simon, the learned and indefatigable Medical Registrar General for Great Britain. Unquestionably the first step towards perfecting our knowledge of death rate, as also of proximate and predisposing cause of disease, would be a Dominion Registration Bill, with a penal

clause sufficiently stringent to insure full and regular returns, these to be collected monthly by Health Officers for cities, towns and municipalities, appointed by the Dominion government, whose duty it should be to obtain from the medical attendants full particulars of subjective and objective symptoms, age, sex, inherited tendency or otherwise, occupation, character of surroundings in regard to vegetable or animal exhalations, purity of water supply, habits, and such other information not sought for in the printed form that the medical attendant might conceive to be conducive to the furtherance of the State object in view, e.g., thermometric and barometric conditions, sudden atmospheric vicissitudes, electrical condition, prevalence at the time of influenza or epidemic catarrh, in fact, all circumstances tending to debilitate the system generally, whether occasioned by atmospheric changes, by residence in an unhealthy locality, by unwholesome or insufficient food, badly ventilated sleeping rooms, by abuse of spirituous liquors or debauchery.

Such careful descriptions of all these statistical minutiae would in the aggregate furnish valuable data for hygienic legislation in the future, and occupy but a small portion of the time of the attendant, whose zeal in the interests, not only of the profession, but of the general public should suffice for the small interruption to professional work. Of the importance of the possession of such data for the prevention of diseases, and enjoyment of life, all medical men will concur. Dr. Aitkins in his excellent work on the Science and Practice of Medicine, thus speaks on the subject, vol. 1, p. 43. "A belief is now gaining ground and acquiring a hold on the popular mind, that advances in the science of medicine in future years will be mainly due to a better appreciation of the causes of disease, and just in proportion as our knowledge of physiology and pathology becomes more exact and extended, so will the causes of disease be appreciated, and their occurrence on a large scale prevented." Sir John Forbes emphatically recorded the observation that, "here the surest and most glorious triumphs of medical science are achieving and to be achieved." Again, Rawlinson in his work on the sewerage of towns remarks. "Within the last half-century, land draining and town sewerage have ripened into sciences. From rude beginnings, insignificant in extent, and often injurious in the first

instance, the systematic sewerage of towns and draining of land have become of the first importance. Land has thus in not a few instances doubled in value. Town sewerage, with other social regulations have contributed to prolong life from 5 to 50 per cent., as compared with previous rates in the same district. Agues and typhoid fevers are reduced in the frequency of their occurrence. Since 1840, an annual mortality in English towns of 44 in 1000 has been reduced to 27; an annual mortality of 30 has been reduced to 20, and even as low as 15."

If we view as we may fairly do, imperfect drainage, exposure to cold, vicissitudes of season, bad air, filth, errors in diet, clothing, exercise, &c., as the factors of disease in the adult, how much more destructive are their agencies with children, in whom an excess of susceptibility of nervous and digestive systems exists. (Take for example, Cholera Infantum, a disease almost confined to cities, and most unmistakably the result of foul air from faulty sewerage.) *A fortiori*, it is incumbent on the legislature, as far as practicable to devise such measures as are best calculated to limit causes of disease, and to prevent the perpetuation of them hereditarily. Contrast Rawlinson above quoted, with the bills of mortality in England for ten years before 1811. In England a little over 47 in the thousand, in Wales a slight excess over 58. On the average for six years preceding 1803, one out of 43—668 died annually.

At Geneva, correct tables of death have been preserved since 1560, and the results are in the highest degree curious and satisfactory. It appears that at the time of the reformation, half the children born, did not reach four years of age: in the 18th century, it increased to above 27 years. We arrive hence at the remarkable conclusion, that in the space of about three hundred years, the probability of prolonged life to a citizen of Geneva at his birth has become five times greater. The mean life was thus; in one century, eighteen years, in the next it grew to 23, in the middle of the next it rose to 32, and finally during the present century to over 36.

From a paper read by M. Moreande Jonnes, before the Academy of Sciences in Paris, I will make a few extracts bearing on the influence of climate and seasons on mortality. "The mortality in the Roman states, in the old Venetian territories,

in Greece and Turkey, amounts to 1 in 30. In the low countries in France and in Prussia 1 in 39, in Switzerland, Austria, Spain, and Portugal, 1 in 40, in Russia and Poland 1 in 44, in Norway 1 in 48, in Ireland 1 in 53, in England 1 in 58, and in Scotland 1 in 59. The two leading causes which influence the population of a country are climate and civilization. A cold climate is more favourable to life than a warm one, thus in Batavia it amounts to 1 in 26, in Trinidad 1 in 27, Martinique 1 in 28, Barmby 1 in 20, Havannah 1 in 23." Unmistakable evidence is thus afforded of the decrease of mortality, chiefly to be ascribed to the vastly improved science of medicine and to governmental enforcement of sanitary precautions, particularly to compulsory vaccination. The Ontario Vaccination Bill has failed to insure the general vaccination of the community, principally, I apprehend, from the great difficulty in enforcing a sumptuary law; had it contained a provision for the appointment of a public vaccinator for each school section, and the government had furnished to an appointed medical township officer a sufficient supply of reliable lymph for distribution, requiring him to make a report of the number of children in each school division, and the numbers successfully vaccinated; we should now enjoy a greater immunity from a disease that the increased number of emigrants from Europe is yearly likely to propagate.

We have both in the Ontario and Dominion Legislatures, a fair representation of the profession, and to these gentlemen we must look for a re-modelling of the medical *police* of the country, and for a correction of the manifold defects now existing. That they will respond to the call I have little doubt, as they will be sensible that, in their capacity as legislators, they may effect a great work in the cause of human happiness and improvement, and thus gain a more enduring reputation than the ephemeral triumph of party can afford.

CHAS. WM. COVERNTON, M.D.

To the Editor of the LANCET.

SIR,—The following appears upon a quack preparation which is being sold by pedlars throughout the Province of Ontario, over the signature of a leading member of the profession, "Having examined a recipe for ingredients in a liniment made by Mr. ———, I consider them simple and safe

for use, and when combined, will form a very useful liniment for external pains.

The practitioner referred to being known in this locality, the *liniment* is found in almost every house, and is tried for every ailment before medical aid is sought. In one case, fresh in my mind, a child was treated with the liniment, thus recommended, for *external pains*, until further treatment was useless. The patient died of meningitis an hour after a physician was called. Please give your opinion in regard to the above in the LANCET, and oblige,

A SUBSCRIBER.

[The practice of medical men endorsing patent medicines, liniments, swing cradles, belts, supporters, prepared foods, cocoa, chocolate, cod liver oil, &c., when intended as a recommendation to the general public, is entirely wrong in principle. Such recommendations, when considered worthy, should be confined to the profession, and appear only in well regulated medical journals. The appearance of names of medical men in the public prints, in such a connection, always suggests the idea that they have some personal interest in the matter, or are seeking a little notoriety; and for these reasons members of the profession should be very chary about endorsing any remedy or appliance. Besides, as in the above instance, much injury is likely to follow the indiscriminate use of remedies without the advice of a physician.]—Ed.

URINARY CALCULI IN AN INFANT.

To the Editor of the LANCET.

SIR,—On the 13th September, 1870, Dr. McVean, of Carleton Place, Ontario, was summoned to visit a child (male) aged six months, affected with retention of urine. On introducing a catheter it impinged against a hard substance near to the corona glandis; and after several unsuccessful attempts had been made to remove it by digital manipulation, he requested me to visit the patient with him. On our arrival we found the child suffering from excruciating pain from over-distention of the bladder. As soon as anaesthesia was fully induced, Dr. McVean made an incision an inch long on the superior aspect of the penis, introduced a curved probe and removed a stone about the size of a small pea. The child immediately thereafter, with the aid of gentle pressure, urinated freely and

copiously. Cold water dressing was applied, and on the third day the wound had completely cicatrized.

In March, 1871, Dr. McVean asked me to visit the same child, again afflicted with retention of urine. On introducing a catheter, it came in contact with a stone immediately outside of the os pubis. As soon as the patient was sufficiently under the influence of chloroform, Dr. McVean introduced a bistoury into the urethra, between the os pubis and the stone, and cut forward about an inch, and with a bent probe extracted a calculus similar in size to the former one. The same treatment was adopted as in the first operation. The child has ever since enjoyed uninterrupted good health.

WILLIAM WILSON, C.M.

Carleton Place, Sept. 25, 1873.

Selected Articles.

EXTRACT FROM AN ADDRESS ON HYGIENE.

BY L. B. BOTSFORD, M.D., ST. JOHN, N. B.

(Read before the Canada Medical Association, August 6th, 1873.)

Our profession stands first and pre-eminently first in its qualifications for investigating this broad field of causes. The law-maker may apply his regulating powers when he has sufficient knowledge to act. The divine and philanthropist may urge the consciences of individuals or communities to obey the requirements which reason and law would enforce. Yet, though the legislator and the moral teacher may both help in demonstrating the many evils to be avoided, and both be necessary in the great work of advancing the race,—as to the knowledge of the principles which tend to the amelioration of society, the medical man, by his acquaintance with disease, by study of the circumstances which enter into its production or prevalence, must occupy the vantage ground in hygienic investigations. He knows best what value to place upon collected data, and is ever seeking for causes to account for them. Most if not all the reports upon sanitary matters have been furnished by him, or he has supplied the data upon which they are based; and in the future this must continue to be the case. Medicine is a noble profession, and we cannot too highly esteem the men who adorn it in their endeavors to remedy the ills, and assuage the pains of their fellow-men. And Surgery, which grapples with the destroyer and

snatches many victims from his grasp, stands in the foreground of high praise, yet both must be regarded as *specialities* in themselves. Advanced as they are and wonderful as they are, they but contend with the visible results of noxious principles. A much higher, and a more advanced position will be that, which will occupy itself with the numerous and ever working conditions which are the fruitful *sources* of disease and suffering: an ignorance of which may render futile the most masterly performances of the surgeon's hand. Medicine may do battle, even successful battle, with the armed men who spring up from the sown dragon's teeth, Hygiene destroys the seed ere they touch the mother earth. Surgery, like Hercules, may strike of the heads of the Lernean Hydra; Hygiene, Iolas like, sears the roots from which they continually re-issue.

It must be evident to all that in order to establish a true Hygienic system the foundation must be laid by a thorough registration of the deaths which occur; these must be registered not by practitioners as such, nor in limited areas, but must be exacted by a government system, general in its operation and embracing a whole people. That advances are being made in this direction, I will quote a few remarks of Dr. Acland. At a late meeting of the Social Science Congress, he said: "We must find out a way of getting at the precise data of mortality—the rate of life in all civilized portions of the world—such was the astonishing success that the Registrar-General was actually able to tell us at breakfast once a week, how the people are getting on, not only in Oxford, London, Manchester, and so forth, but he told us also of New York, Vienna, St. Petersburg, of Bombay and of Bengal."

A mere record of deaths can be accurately accomplished by any civil machinery, but will be of little use, unless the cause of death is also ascertained. At this point comes in the importance of the medical profession, an importance increasingly acknowledged when the effort is made to ascertain the remote and subtle influences which intensify the death rate.

As the rate is not uniform, but varies in different localities and at different periods, the next step will be to ascertain the conditions which precede or attend the mortality, and this opens up all the causes which diminish the vital powers of man. Among these may be ranged: mental depression, social habits, local influences, meteorology in all its phases, food and drink, overcrowding, bad sewerage, and whatever in fact tends to undermine the functions of life, and subjects the animal to premature death.

Diseases which are communicable have long occupied the attention of Governments, as well as of the profession. They are palpable, and force their consideration upon all. Terrified by the

destructive power of some, Governments have been compelled to take measures to avert evils, which sweep our kingdoms and are not stopped in their course by the widest oceans. A wild terror has too often suggested means of prevention, and Quarantine, right in itself, has frequently violated all common sense. To say that a disease is communicable, suggests at once the idea that it can be limited; and to accomplish this, regulations, communal and imperial, are made. These regulations require to be based upon a great deal of accurate observation and a great deal of philosophical thought. For, however much may have been done, there exists still a great ignorance of the conditions of several of these diseases; and until a more exact knowledge is attained, errors in Quarantine must arise. Medical men ever differ upon the essential character of several of them, some medical men maintaining those to be epidemic, which others as firmly maintain to be communicable, whilst both may be ignorant of the region to which the propagation may be limited. The characteristics of *one*, however, are too palpable, and small-pox, one of the most virulent, has to be met by the most stringent isolation. The office of Hygiene will be to ascertain the exact nature of these scourges: the virus which propagates itself in the animal economy; their epidemic character, whether it depends upon the increased *subjective* poison, or upon the *objective* conditions, or upon both; their prevalence, whether general or local. When these conditions are known, then, we may look for wise legislation in the direction of a thoroughly sound Quarantine.

Of epidemics pure, and their causes, but little is known.

Diseases personally induced form a large class and arise from causes which being generally known can be avoided. The tendency to perpetuate the same action will cause some which are the result of personal contact to be ranged under the next class which comes under our observation—that of inherited diseases. They are numerous and deeply interesting, and they are the result of a train of external circumstances which, acting during a longer or shorter period, impress a character upon the animal economy.

The death rate of these several diseases may be tolerably uniform, but they are subject to influences which may greatly increase or modify their intensity and mortality, and it is to these influencing data that our further attention must be directed. Taking inherited diseases for our illustration, they are the result of tendencies already brought into existence by exposure to external causes, aided by the habits of life of previous generations. A concentration of these causes will develop a further increase of the same diseased action until the death rate shall be greatly in excess of the average, so that when depressing agencies lower the vital resistance the

disease will assume the character of an epidemic. Scrofula is undoubtedly an inheritance, and yet may not scientific Hygiene determine the conditions which are favorable to its production, and may not the tendencies to such diseased action be steadily beaten back by a removal of the disturbing elements which called it into being and activity? The disease cannot be original, for who of living men would be exempt, and if induced why may it not be eradicated.*

Death may, and often does, become more frequent owing to disturbing causes which act upon the vitality of communities, and Hygiene can only become acquainted with those noxious elements by an extensive observation of the physical conditions which so operate, and among these meteorology holds a prominent place. Climate, which embraces variations in the relative degree of moisture and temperature, differences in the barometrical and electric state of the atmosphere, exercises a modifying power over the system. The physique of man in different countries shews this, and sometimes we may expect a deterioration of a race by a change of climate, until an adaptation to the new conditions is developed. It is questionable whether the constitutional characteristics of the people of this continent will not require a long time before they settle down upon a permanent basis.

Some causes are so palpable that their results are recognized at once, and yet, simple as they appear, are so mixed up with other disturbing elements from a common source that they require careful elimination before their true value can be realized.

Cold affects the mortality of the aged and we might naturally expect this, for when age advances the power of generating animal heat becomes less. On the other hand, the greatest death rate among the young is during periods of highest temperature.

The air we breathe may be charged with death.† The effects of continued moisture or of an electric state of the atmosphere can only be determined by observations over large areas, liable however to er-

* The chief effort of sanitary science in combating the prevalence of Zymotics, is to destroy and arrest their infection and contagion; but the scope of its endeavours must be greater when the Tubercular Diathesis among the people is to be counteracted. Then the chief desiderata are warmth, clothing and food, which are within the province of individual or of family arrangements; and fresh air, exercise, and relaxation from daily toil, which must for their indulgence receive the help of municipal or of national policy. (Trench, 1809, p. 35.)

† In the Dublin Lying-in Hospital 74 years ago, of 17,600 children born in the institution, 2,944 died within the first fortnight,—17 per cent. Dr. Clarke considered a foul and vitiated state of the air of the wards a principal cause. Arrangements were adopted by which a free circulation of air was secured through the wards; of 8,033 children born subsequently, only 419 died, or 5½ per 100. Under additional improvements a further decrease of the death rate—of 16,564 born, only 286 died—about 1.7 per 100.

rors, as the conditions may give rise to many and subtle influences.

The food we eat and the liquid we use constitute important items among the causes which tend to affect the stamina and vital powers of man. * The quantity and quality of the first (Trench for 1863, p. 6) at various periods and under varying circumstances. The conditions under which water, coffee, tea, and other liquids are most beneficial require observation. Theory cannot solve the question unless theory is based on facts.

Locality must be well considered to elicit the results which may be common from similarity in geological, meteorological, or topographical conditions, or in more limited areas which may arise from disturbing elements such as animal or vegetable emanations.

The phenomena which are grouped, rightly or otherwise, under the head of "Intellect," largely affect the organism of man, and it is a question whether we do not have to deal with elements more destructive to human life than from all the causes we have previously noticed, inasmuch as all these are intensified by the social condition of the race. Governments which vary in their tendency to elicit human thought and the development of self-government and individualism will vary in their power of grappling with social evils. Despotism which dwarfs and represses thought, can only be surpassed, in evil results, by the licentiousness which characterizes the other extreme, when every man does that which is right in his own eyes.

Customs which prevail in communities produce in individuals those habits which are injurious or beneficial, and both are apt to escape strict investigation, as they commence with our existence and are strengthened with our growth. We look upon the fashion or custom of the Chinese woman who represses the growth of her feet, and the still more injurious fashion of the European or American who contracts her breathing space, as violations of natural laws, and yet there are evils connected with our every day life more injurious from their numbers, which, if the attempt be made to overturn them, the great mass of society will resent as unnecessary interference.

Custom prevails in our buildings, in our ventilation or rather want of ventilation, in our eating, our clothing and drinking, and from childhood those social habits are so familiar that they pass unquestioned, and yet every fact of our every-day life might be based upon a scientific foundation. It is only of late that attention has been directed to them.

There is one custom of society which as yet has

* "The effect of water is well illustrated by the experience of the Mill Bank Prison. In 1854 the water from artesian wells was introduced, and the result has been the virtual extinction of typhoid and other diseases of the same class, which frequently prevailed in the institution."

had but a slight investigation, however fearful the results which a partial lifting of the veil has disclosed.

The drinking *custom* is yet too strongly rooted to permit a candid and honest consideration. The mortality directly arising from the use of alcoholic drinks forms quite a percentage of the annual death-rate; but who can tell the number it adds to the general percentage by diminishing the powers of resistance to disease which might not otherwise be fatal? *

Overcrowding, whether of dwellings or of localities, increases the death-rate, and it is only by the most perfect Hygienic arrangements that injurious results can be prevented when the population in any given area becomes numerous.

It is through the agency of the intellect that we must look for a regulative of the conditions which will result in the greatest possible physical good; and these regulations can only be wisely made when observation has laid the foundation by recording all the possible facts connected with disease and death, and just in proportion as this is done will legislatures be enabled to enact their laws upon a scientific basis.

In the system of prevention, Quarantine occupies a prominent place, and, to be efficient, requires an accurate knowledge of diseases, their methods of propagation, and the best means of keeping them from spreading.

The aggression laws over-ride individual and communal rights, when the exercise of those rights might be injurious to the people generally. Compulsory sewerage, restrictions as to buildings and the number of occupants, width of streets, and the measures which require the exercise of a restraining legislation.

In Great Britain sanitary regulations, though numerous before 1848, were in that year included in a general Act, and a system inaugurated by which every part of England could avail itself of law to carry out necessary reforms.

* * To secure a Hygienic education we must look to three sources:—Governments, Universities, and Individuals. From individuals as such or associated, and chiefly from men in our profession, will come the condition of localities, the elements of disturbance, and all the facts which require a quickened intelligence to eliminate as bearing upon the question. Whilst governments *only* can obtain returns of vital statistics from a whole country by compelling a registration of deaths and the causes of death, they also can secure meteorological observations from all quarters, and by a central depart-

* LIQUOR TRADE AND CONSUMPTION.—"The people of Great Britain are spending in drink \$500,000,000 a year. A trade has grown up with a capital of \$600,000,000. A trade more powerful far than the cotton industry with its capital of \$400,000,000, and which, after all, in its legitimate exercise, provides but a luxury, and in its illegitimate, the most insidious of all social temptations."

ment have all the data collected and tabulated. But chiefly upon the centres of education will devolve the duty of imparting to their alumni the knowledge obtained from all sources, and if in every medical school there was a Professor of Hygiene, who does not see that with leisure and ability to investigate the numerous facts now being collected, such Professors would be able to generalize and elicit the relationships which exist among all the phenomena of life, and to place intelligibly in a few months before their students more than could be obtained in a lifetime of individual exertion amid the cares of a professional career. And not only so, but in every University there should be established similar chairs, so that the relationship between man and his physical surroundings should form a part of the education of those who, in the nature of things, must be the future legislators of the land, who, thus instructed, would be ready to legislate wisely and intelligently, instead of groping their way in ignorance.

And who can tell the grand results when the material condition of the race shall be advanced by enlightened sanitary knowledge and regulations, when the causes of disease are attacked in their strongholds, when rational amusement shall supersede the discordant sounds of the revel; when the wants of the system shall be satisfied with proper foods; when the physical state of man shall be elevated, and reacting upon his intellectual and moral powers shall lift the race to the highest possible attainments. (*Canada Medical and Surgical Journal.*)

DR. BURDON SANDERSON ON PHYSIOLOGY.

(Brit. Med. Association.)

The special subject of Dr. Burdon Sanderson's recent address was that never-failing topic of interest—the nature and causation of the febrile state. That the majority of medical men, even those of high position and reputation, should have been so long content to talk in a perfectly vague manner on this subject, without one serious attempt to *aborder* a question which lies at the foundation of the larger part of the difficulties actually encountered in medical practice, is indeed surprising. On the other hand, Dr. Sanderson showed that physiology has till lately given forth a very uncertain sound upon this question, and it is only very recently that some of the more important preliminary queries have been satisfactorily answered. Taking heat-production as beyond comparison the most important phenomenon of the febrile state, we may congratulate ourselves upon the settlement of one point of prime consequence. Two rival theories have prevailed; according to the former of which the excess of bodily temperature observed in fever is only a consequence

of varying conditions as to the calibre of peripheral bloodvessels, in consequence of which heat simply *accumulates* in the body (Traube), or the superficial bloodvessels (on Marey's theory), being dilated, receive an unusual quantity of hot blood from the interior parts of the body, and record the excess on the thermometer placed in the axilla or in any similar part. The other main theory ascribes the excessive heat of fever to a real excess in internal heat-production from oxidation of tissues; and it is now conclusively demonstrated that at least three-fourths of the measureable heat-excess in severe pyrexia must really be due to this cause. The experiments of Liebermeister have proved that no possible accumulation of heat within the body can account for more than a fraction of the elevation of bodily temperature observed in fever; and, indeed, the dependence of the latter, in the main, on increased oxidation is also shown by the presence of a very large quantity of urea in the urine, even of febrile patients who are kept upon absolute *diète*.

Though too cautious to commit himself to a new general theory of pyrexia, Dr. Sanderson called attention to the muscular system as very possibly the scene of hyper-active chemical changes which might suffice to account for the whole of the increased heat-production in fever. There is, on the other hand, the remarkable fact (to which the lecturer referred) of the marked elevation of temperature produced by strychnia, and the equally marked lowering of it which is caused by the paralyzing action of curara; and, on the other hand, there is the evidence afforded by those softenings and granulations of muscular tissues which the researches of Zenker and others have shown to follow upon protracted and severe pyrexia.

Perhaps, however, the most felicitous and instructive portion of the lecture was the illustration of how accumulation of heat *may be*, though it commonly is not, the source of febrile manifestations. The illustration is taken, not from clinical medicine, but from the physiology of a particular class of men—the workers in Cornish mines. The workman in a "dead end" (i.e., an unventilated cul-de-sac) in one of the "hot mines" of Cornwall suffers under a complete suppression of that discharge of heat from the surface by which a dangerous accumulation within the body is prevented under ordinary circumstances; the result is, that about ten or fifteen minutes of muscular exertion in this atmosphere suffices to collect such an enormous quantity of heat and other combustion products within him that he straightway exhibits all the phenomena of true pyrexia, which, however, can be relieved by exposing the surface of the body to free ventilation. (*Lancet.*)

COST OF AN EPIDEMIC.—*The London Medical Record* (April 16, 1873) states that the late small-pox epidemic cost Dublin at least £35,000.

DR. PARKES ON INFLAMMATION.

(An extract from the address on medicine—Brit. Med. Association.)

Once everything was dyscrasia; and the belief that a profound alteration of the fluids, and especially of the blood, underlies most morbid changes, for a long time governed a large school of pathologists.

In this country it never obtained great weight, though it certainly tended to modify our ideas of the origin both of cancer and of tubercle. Gradually losing ground before the pressure of opposing facts, the doctrine of crasis at length gave way to a local pathology almost as extreme. The theory which superseded it was the celebrated cellular pathology of Virchow; that theory which looked only to the individual elements; which traced all to growth of cells, and which virtually rejected the idea of exudation in the old sense of the word. It was admitted, indeed, that nutritive cell-less fluid emerged in disease from the vessels as in health, but it was caught up and appropriated by the cells met with outside the vessels, and especially by the connective tissue corpuscles. At one time it seemed as if the time-honored term "exudation" would be banished from pathology, and the old doctrine of inflammation seemed altogether undermined. But this cellular pathology was, like the creed it superseded, pushed too far. True to a large extent it was made to embrace conditions beyond it, and the inevitable reaction came. In 1867, Cohnheim described the transit of the white blood-cells through the unruptured walls of the capillaries, and the old doctrine of exudation had again an empirical foundation. I say Cohnheim described, but I did not say he discovered. For the discovery had long been made, and the fact that it had been made and had been disregarded is a striking instance of want of appreciation of a cardinal fact, of which so many cases are recorded in the history of all sciences. It is bare justice to record that in 1839 William Addison, now of Brighton, perfectly described the emigration of the white blood cells, as well as many other phenomena which attend inflammation. The fact did not escape notice, and one writer, at least, Charles Williams, in his well known work on the *Principles of Medicine*, appreciated its importance. But, as a practical matter, the discovery fell dead, and when Cohnheim announced the fact twenty-eight years later, the world of pathology was stirred to its depths. It is also but justice to observe that the chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside the vessels was not known.

At present the pathology of inflammation seems

settling down on a mixed humeral and solid basis. It seems to be admitted that the albumen in the blood which feeds the organs partakes of the quality of the food which supplies it, and is modified also by the condition of the organs, whose action prepares its introduction into the main torrent of the blood. Degrees of nutritive adaptability may, therefore, exist in it, and we may fairly assume that the composition of the blood albumen must vary, and that it is quite possible it may be sometimes so degraded as to justify the idea which underlaid the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules, so to speak, which, though without a cell wall, can be classed with cells. The cellular pathology is, to this extent, an undoubted and valuable generalization.

Elsewhere he adds in his remarks on phthisis:— If the doctrine of inflammation has thus, as it appears to me, made the full circle of change, the same may be almost said of phthisis pulmonalis. Laennec's genius, so sure and accurate when he was dealing with the interpretation of physical phenomena, failed when he attempted a definition of phthisis. Like many a geographer, he wished to fill up his blank map, to insert a coast line here and a watershed there, and to have everything defined, described, and completed. It was an impossible attempt, for the country had not been surveyed.

In two points late researches have, I think, influenced our view of looking at phthisis. In the first place, it has been shown how many cases of phthisis are caused by removable conditions: breathing of air impure with solid particles, constrained positions, syphilis, etc., are now known to produce many cases of wasting lung diseases, and, as it is possible to prevent these, and thus to lessen the prevalence of phthisis, we have now a greater element of hope than formerly. On the contrary, the evidence of the so-called infective nature of phthisis, that is, the way in which it can originate in the lungs from distant infected parts, the way in which it extends to adjoining parts, or, perhaps, to distant parts of the lung by absorption from a diseased lung centre, and thus returns and returns until fatal inroads are made on the organ or the system at large; the constant production, in fact, of fresh centres of spread, is a discouraging aspect. On the whole, the last thirty years have done much for the treatment of phthisis, but it is not all unmixed gain, and the amount of future progress is uncertain.

WRIGHT'S CURE FOR HEADACHE FOLLOWING ALCOHOL DEBAUCH:—Take of solution of acetate of ammonia, tincture of bitter orange-peel, syrup of bitter orange-peel, each 20 parts, water 500 parts. To be given in repeated teaspoonful doses.

PARACENTESIS THORACIS.

A valuable letter addressed to Dr. Clifford Allbutt, by Dr. Bowditch, of Boston, on Paracentesis Thoracis, has been published by the *Practitioner* for April, 1873. Dr. Bowditch has employed the pneumatic aspirator on two hundred and seventy occasions during the last twenty years without injury ensuing. He admits some grave accidents, such as tapping the lung, driving air into the pleura, by a careless turn of the handle, etc. The following are some of his conclusions.

1. He uses a very fine trocar, and thrusts it in fearlessly and quickly, so as to avoid carrying in pleural false membrane. He selects a point in the back on a line with the angle of the scapula, and between the eighth and ninth or ninth and tenth ribs, and at least an inch and a half above a horizontal line drawn through the lowest point at which the respiratory murmur is heard in the opposite lung. 2. No complication whatever prevents his operating if he find a large effusion or any effusion that he thinks may be adding to the distress of the patient already very ill. 3. Age, sex, and pregnancy are of no importance in a severe case. He has tapped a pregnant woman four times before and five times after delivery. His criteria are: Is the dyspnoea severe enough? Has it occurred, even once, so as to threaten life even momentarily? Has sufficient time elapsed for remedies to have effect without result? 4. If there have been temporary orthopnoea, or if dyspnoea is present, he operates instantly, however serious and complicated the other signs may be. If the illness be recent, the effusion small, the dyspnoea but slight—if remedies seem to be having a beneficial effect, he waits sometimes three or four weeks. He adds: "I think we may operate in any case where the quantity of fluid is obviously so large as to seriously obstruct the greater part of a lung, as when the level rises to the middle of the back, and in so doing, oppresses the respiratory murmur in the entire organ." Any valvular opening he considers as worse than useless, as absolutely bad. "It is wholly uncalled for with the aspirator canula." It also clogs the exit of pus, should the fluid be of that character. When ought a permanent opening to be made? This is often very difficult. He inclines to it in a young or middle-aged subject, generally healthy, who has been ill but a short time. Pus must have been drawn at least once. This pus must show a tendency to reaccumulate rapidly. In elderly people and in those with signs of phthisis, he prefers repeated tapplings with the aspirator; till, even this he regards as open to discussion. So long as the serum flows from the aspirator, he thinks a permanent opening is not justified. Blood always contraindicates it. Blood at the first tapping has always indicated malignant

disease. In making a permanent opening, a very free incision is preferred to the use of any tube or trocar whatever, however large. That incision, it is recommended, should be low in the back, instead of in front, as is usual. Free washings with warm or carbolised water are also advocated. *Brit. Med. Four.*

PROGNOSIS OF DELIRIUM TREMENS.

DR. MAGNAU (*Mouvement Medical*, May 30) remarks that it is important to diagnose what cases of delirium tremens are likely to prove fatal when the early appearance of the disease is so constantly similar. Delirium proves nothing, for it may be intense in a slight attack. What is most important is the temperature. The attack of delirium tremens may be febrile or apyretic. In feverish cases we see the temperature rise rapidly to 39°, 40°, 41°, and 42°, and even, in some cases, to 43°C. If the termination is to be favourable, we notice towards the fourth or fifth day a sinking of the temperature, which gradually becomes normal. If, on the contrary, the termination is to be fatal, the temperature remains stationary, or rises to the last. In non-febrile cases, the thermometer oscillates between 38° and 39°, and about the third day becomes normal.

A second prognostic sign consists in motility. The trembling of the whole body is not the most important symptom. There are undulations of the muscles which continue during sleep, and are constantly observed when the hand is applied to the muscular surface of the patient's body. In such cases we may affirm that the prognosis is grave, the spinal cord is attacked, greatly hyperæmiated, and destroyed even in certain points by hæmorrhage.

A third sign consists in the feebleness of the lower extremities; a kind of paraplegia.

M. Magnau insists that we must not confound febrile alcoholism with fever arising in a drunkard from a wound or inflammation.—*The Doctor.*

A NEW THERMOMETER.—Dr. Hilliard has added another clinical thermometer to those in use, and a capital one it is. We have very little doubt it will prove a success. Its chief point is that it shuts up like an ordinary pencil case, and then goes into the vest pocket. Thus, there is no separation between the handle or case and the thermometer itself. The latter therefore cannot fall out, nor does it require so much trouble to put away after use. It has also the advantage of being increased to double its own length on opening it. The temperature consequently can be taken and read in positions in which it is not so easy to do it with the common pocket instrument. The case has fluted mounts, so that the instrument, whether open or shut, will not roll off the table.—*Medical Press and Circular.*

DIPSOMANIA.

We gather from a notice of the Annual Report of the Superintendent and Physician of the New York State Inebriate Asylum, Binghampton, New York, for the year 1872, in the *Boston Medical Journal*, that the report is largely taken up with the consideration of inebriety as it appears in those who have lost all self-control in the use of alcoholic beverages. It is assumed—1. That intemperance is a disease; 2. That its primary cause is a constitutional susceptibility to the alcoholic impression; 3. That this constitutional tendency may be inherited or acquired; 4. That it is curable in the same sense that other diseases are. In other words, as a disease, inebriety has its cause, diagnosis, prognosis, and treatment as clearly marked and as well defined as are those pertaining to other diseases. To support these propositions, the report cites at considerable length the opinions of Drs. Christison, Rush, Woodward, Parker, Flint, Anstie, Druitt, and other recognised authorities of this country and Great Britain, and asserts that “the fact that the inebriate is suffering from an actual disease which deprives him of the power of self-control, should forever do away with the supposed disgrace and mortification attendant upon such a condition; and there should be no more social disgrace in seeking a cure for this malady, than there is in being taken to an hospital for the treatment of a fractured limb.” As to the time required, the report advocates that patients should, as a rule, remain at least six months under treatment. Several have become inmates of the institution who were addicted to the excessive and habitual use of opium. In the treatment of such cases the “weaning process” is advocated, “letting the patient down by degrees with comparatively little suffering.” The number of patients admitted during the year was 249; discharged 253; remaining at the close of the year 81. *Brit. Med. Jour.*

A PHARMACEUTICAL CURIOSITY.—The Berlin correspondent of the *Chemist and Druggist* sends the following specimen of extraordinary pharmacy, culled from the first edition of the Prussian Pharmacopœia (*Dispensatorium Borusso-Braudenburgicum*, 1721). This is in Latin. The specimen which he selects is “*Spiritus Cerebri Humani*,” p. 206 (Spirit of Human Brain). “The brain of a young man well built and perfectly healthy, but who has been put to death by some violent means, must be crushed, with all vasculars and the spinal marrow, in a stone mortar; afterwards mixed in a glass retort, or in a large phial, with ‘Kaiser Karls Hauptwasser’ (somewhat similar to our eau de Cologne) and spirit of wine. This mixture is to be distilled after having stood by for one, or better, for several years. The dose of this elegant rémède was fixed at a tablespoonful.”

ON THE TREATMENT OF GONORRHOEA, AND ESPECIALLY GLEET, BY MEDICATED BOUGIES.—Mr. G LOREY gives a detailed result of eighty cases of acute gonorrhœa treatment with Reynoal's medicated bougies at the hospital du Midi. These bougies are made of gelatine and gum; the gelatine forms the skeleton, the central and resisting portion; and the gum, mixed with the remedial agent, is spread on the surface. They are about six inches in length, and of a diameter of about one-fifth of an inch. Their consistence varies with the temperature, more or less soft; but by dipping them in cold water they can be readily passed into the urethra without causing pain. M. Lorey has found the opiated or belladonized ones very efficacious against chordee; each one contained about three-fourths of a grain. Almost immediately after the introduction of the bougie the erection subsided, and subsequent micturition was less painful. In the first stage of acute gonorrhœa, he has obtained the following results: 1. It renders micturition painless, or comparatively so; 2. It allays or prevents chordee. But, in the second period, the belladonized sulphate of zinc bougie has not been as efficacious as anticipated. However, it presents the following advantages: 1. Its use is more simple than the injection; 2. Under certain circumstances it permits the discarding of the use of injection; 2. As they require an hour to melt in the urethra, their therapeutical action on the mucous membrane is prolonged. The observations made on sixty cases led him to arrive at the following conclusions: 1. The opiated or belladonized bougies are indicated in the first days of a gonorrhœa, to allay and prevent chordee, to render micturition painless; they have a double action; they first allay the pain, and they isolate the inflamed parietes; 2. In the second stage the sulphate of zinc, or the belladonized sulphate of zinc bougie is really efficacious, but does not appear to be much more so than analogous injections. In chronic gonorrhœa or gleet, their efficacy is unequalled by any other treatment. The twenty cases submitted to that treatment all recovered; requiring, on an average, the introduction of but nine bougies. This rapid curative action of the bougies can be readily explained by its double action; the three-fourths of a grain of sulphate of zinc contained in each has an undoubted therapeutical action on the chronically inflamed mucous membrane; moreover, they act mechanically, by remaining in contact with the diseased membrane, acting as an irritant body, modifying, by its presence, the vitality of this membrane. It might be suggested that the success of the treatment, in these cases, was due, in a great measure, to the hospital regimen, but this applies *à fortiori*, to acute gonorrhœa. It has been objected that this bougie might induce orchitis, but its irritating action is but temporary, and necessarily modified

by the belladonna; moreover, in the eight cases treated with them, there did not occur a single case of orchitis.—*Amer. Journ. of Syphilography and Derm.*, April, 1873.

NEPHROTOMY.—Mr. CALLENDER removed, last week, a large calculus from the kidney of a woman about forty years of age. As the case is to be published in full in the *St. Bartholomew's Hospital Reports*, we give here only a short notice. The patient was admitted under Dr. Andrews, suffering from profuse pyelitis; she was very weak and greatly emaciated. By palpation through the thin abdominal walls, a large, smooth, hard tumour could be felt in the right lumbar region. It was rather elastic, but not distinctly fluctuating, and resembled somewhat in shape a greatly enlarged kidney. It was at first thought that there might be malignant disease of this organ; but it was found that at times the tumour increased greatly in size, coming forward almost to the umbilicus, and then suddenly collapsed again. It could not be clearly proved that this partial collapse of the tumour was followed by any marked increase of pus in the urine, nor could any stone be felt when the tumour was thus diminished; but there was a distinct history of renal colic, and, after full consideration of the case, Dr. Andrews and Mr. Callendar came to the conclusion that the symptoms were due to the presence of a large stone in the pelvis of the kidney, and that, as the patient was evidently sinking under the constant drain of pus, the removal of the stone by operation offered the only, though slight chance of recovery. Mr. Callendar accordingly made an incision opposite the outer edge of the quadratus lumborum, nearly as if for colotomy. On reaching the back of the tumour, a trocar was introduced, and a quantity of puriform fluid drawn off; the opening was then enlarged, and an oval calculus, nearly of the size of a hen's egg, was extracted. Its weight, taken roughly after the operation, was two ounces and a quarter. The patient rallied somewhat during the first two days, but quickly relapsed, and died on the third day. Unfortunately no postmortem examination could be obtained.—*British Medical Journal*, July 5, 1873.

NEW MODE OF ADMINISTERING COD-LIVER OIL.—Numerous attempts have been made to render cod-liver oil less disagreeable, either by gelatinizing or solidifying it, but only with partial success. The system of capsules seems to answer best; but the great objection is the number of these which must be swallowed. Now it would seem that Messrs. Carre and Lemoine have contrived to incorporate the oil with bread. Each pound of bread contains a little more than two ounces of the oil or five tablespoonfuls, and three ounces of milk. Small loaves are also made which contain only two tablespoonfuls, and which, alto-

gether, weigh only five ounces. These loaves are beautifully white, look extremely well, and have hardly any taste. Both children and adults eat them very willingly. In M. Bouchut's ward, at the Children's Hospital, in Paris, thirty-four small loaves are brought every morning, and are looked forward to with much anxiety by the children for breakfast. They have been largely used among private patients, and no one complains of any disagreeable taste. Five or six tablespoonfuls of oil may thus be given per diem, incorporated with the bread taken with the usual food.—*Lancet*, August 2, 1873.

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DR. WILLARD PARKER ON CANCER.

Dr. Willard Parker, of New York, at the close of an article on cancers sums up as follows: With regard to treatment, I have not much to say. The methods employed may be embraced under the following heads:—

1. Amputation; 2. Caustic applications; 3. Compression; 4. Electrolysis; 5. Medication; 6. Moral treatment.

In the superficial cancer of the breast it is very well to use caustics. The same thing may be said with regard to cancers upon the face. The treatment with caustics in that region is good surgery. When the tumor is situated to any extent below the surface, the idea of caustics is bad surgery.

In two cases which have come under my observation, one died within four days, poisoned by the material used for the caustic application, and the other never reached her home alive.

With regard to the treatment by the use of compression, compressed sponges being usually employed, I have seen no good from it.

With regard to electrolysis, I have seen nothing in it yet to give me any confidence whatever in its use. I have nothing, however, to say against its use. There may be something of value in it, and it should be thoroughly tried. The day was when no knowledge was had with regard to a successful method for the treatment of syphilis, but now we know that by the proper use of proper remedies, that disease can be cured, and charlatanism has left that field almost entirely. With regard to the internal treatment of cancer, I believe very much in it.

INTERNAL REMEDIES.

I believe that the day must come when something will be accomplished by the aid of internal remedies. Of the remedies now used, arsenic is perhaps the one which commands my confidence more than any other. There is another point in the treatment of cancer which I conceive to be of great importance, and that is the moral condition of the patient. I believe that it is impossible to cure our patients of cancer unless they are buoyed up by

hope. Their surroundings should be of a character that will give them the greatest possible amount of comfort and happiness. Keep them in the sunlight of enjoyment, for darkness is the soil in which cancer flourishes.

THE QUESTION OF OPERATION.

Now we come to consider an important question: Do we accomplish any good by operations?

There are some who say, never operate. I think this opinion comes from the older members of the profession, who are inclined to look beyond the simple performance of the operation. The younger men, many of them, say operate. Upon this question I perhaps can do no better than to refer you to the opinions of two men who are among the most experienced of the profession, and who have had abundant facilities for making observations. I refer to Paget and Sibley, both of London.

Mr. Paget has shown, from his statistics, that the average length of life after an operation is 43 months, and that the average length of life without an operation is 55 months. Mr. Sibley has shown from his statistics that the average length of life after an operation is 53 months, and that the average length of life without an operation is 32½ months. Here are the results of observations made by two distinguished authorities. I think all that I am justified in saying upon this point is, that every case must be taken by itself, looked at with all its surroundings, before a decision is given either for or against an operation.

The dangers in an operation are not great, if it is decided to perform it.

The following may be regarded as the indications, when attempting to decide upon any given case.

The older the patient, other things being equal, the more favorable for operation. If the cancer has extended so that we have secondary cancer, it is not surgical to operate. Therefore, when the axillary glands are involved, or when the skin is involved, and we have the local and constitutional disease both existing, I regard it as unfavorable for an operation. When the tumor is isolated, and there are no secondary manifestations, the conditions are favorable for an operation, and the sooner it is performed the better is the chance of preserving the life of the patient.

If a patient comes complaining of an irritable tumor of the breast, apparently connected with some disorder of menstruation, I should recommend, first, careful attention to the general health; and second, if found increasing in size, to remove it at once. There is another condition in which I would operate, and that is in the sloughing cases. Then it is done simply to make the patient more comfortable. Practically speaking, these cases do not belong to secondary cancer, and the operations are not unfavorable. But with all these cases we must use our own discretion. Select the cases, and give them the benefits and advantages of an operation.

Now a few words with regard to the hereditary character of cancer. In the cases which are found in my tables, the cancer taint was present in only 28 of the whole number, 236, whose history upon this point was obtained.

Within the last year I have been examining the Registrar's Bureau of Statistics in this city, and I find, in a period of time extending over about 70 weeks, there were only 532 deaths from cancer of all kinds and in all organs, while from pulmonary consumption alone there were 6,219 deaths, or as 1 to 11½. When compared with Bright's disease it is found that about three times as many die from that disease as from cancer. From the statistics of the Registrar's office for the last five years, the following proportion of Americans and foreigners who died of cancer are found:—

Americans, 68; foreigners, 154; negroes, 5. Savages rarely have the disease.

It would seem as if this disease of the breast is found in certain conditions of life, and that in these conditions it is upon the increase.

Without pursuing the discussion of this subject farther, I will close by saying, that the conclusions to which I have arrived are chiefly as follows:—

1. That the disease is not hereditary, or if so, in a very limited degree.

2. That the disease begins as a local disease positively and purely. It becomes constitutional, just as syphilis begins a local disease and becomes constitutional.

3. That the disease occurs in those of vigorous health, instead of being connected with those conditions in which consumption occurs.

4. That cancerous parents may beget tuberculous offspring. That is, feeble constitutions arising from the effects of cancer will not beget cancer, but the diseases which follow in their line are tuberculous.

5. That the moral condition has a powerful influence on the development or the prevention of the development of cancer.

6. I am very forcibly struck by the parallelism and analogy existing between cancer and syphilis. Both begin by local irritation. Syphilis is inoculable, but cancer has not been proven so to be. In this respect they differ from each other. We have secondary syphilis, and we have secondary cancer. We have tertiary syphilis, but perhaps it cannot be said that we have tertiary cancer, unless it can be said that cancer is tertiary when it affects the bones, as it sometimes does.

In conclusion, I have to say, that we must not give this subject over as an unprofitable one for study and observation. Many diseases have run rampant which finally have been made to yield to treatment, and we may hope that the same thing may yet be accomplished with reference to cancer. The work of the histologist and pathologist may yet bring us into the light, and the day may come when we can say of cancer, as we now can say of syphilis. It can be cured.—*Medical Record.*

TRAUMATIC DESTRUCTION OF ONE CEREBRAL HEMISPHERE WITHOUT FUNCTIONAL DISTURBANCE.

The eminent Italian surgeon, Porta, brought before the Institute of Lombardy, on the 29th of December, 1872, the case of a man who, in consequence of a severe injury, lost the whole of the right hemisphere of the brain. The unconsciousness lasted a few hours, but when the patient recovered his senses, he recollected being picked up and taken upon a cart to the hospital. He stayed two months and half in the institution, the skull exfoliated, and the wound became fungous, when he claimed his discharge, though affected with paralysis on the left side, which had occurred immediately after the infliction of the injury. He subsequently applied at the clinical wards of Pavia, where Dr. Porta had an opportunity of studying the case. Eighteen months had elapsed since the accident, and twelve months since the closure of the wound. The author minutely describes the integrity of the intellectual functions, the amount of paralysis in the upper and lower limbs, and concludes by dwelling on the three following points:—(1) That the encephalon is a double organ composed of two equal parts, and that, one being destroyed, the other survives without functional disturbance. (2) That in the different spheres of the cerebral, medullary, and nervous systems, special and diverse functions are perfectly isolated and localised, the disturbance of the functions following localised injuries. (3) That, in the present case, electricity diminished the paralysis of the arm, and that the improvement would have been more marked had the treatment been sufficiently prolonged.

The case is confirmatory of the well-known experiments on the lower animals, from whom a whole hemisphere was removed.—*Lancet*.

ACTION OF ALCOHOL ON THE TEMPERATURE OF THE BODY.

Mr. Daub has recently been investigating the effects of non-intoxicating doses of alcohol on the temperature of healthy men, under the supervision of Professor Binz. He points out that determinations of temperature by means of the thermometer in the axilla are not very satisfactory, since in the course of an hour or two spontaneous variations of several tenths of a degree may frequently be observed. Such a method of ascertaining the temperature may be useful enough for all practical purposes for the physician, but the accuracy is not sufficiently great for scientific purposes. For these the temperature of the rectum should always be employed. The best time for taking the temperature is from 3 to 7 o'clock A.M.

The quantity of alcohol given varied from 30 to 110 c.c. of a 98 per cent. alcohol, with about double the quantity of water and a little sugar, at about 60°F. In almost all instances a well-marked lowering influence was observed, and in no case was the temperature observed to be raised except in the case of a boy with osteitis about the knee-joint.—*Lancet*.

TREATMENT OF FISSURE OF THE ANUS.—A lecture on this subject, by Dr. Dolbeau, is reported by Dr. Osborne Powell. He observes that each evacuation of the bowels is accompanied by a feeling of something cracking, followed by intense pain; nevertheless, in many instances no fissure can be found, even after the most careful and minute inspection. He consequently regards it as of the nature of neuralgia. It commonly occurs between the ages of eighteen and thirty, and most frequently in women. In the treatment, the first thing to do is to abolish the muscular element. Récamier, whose name is inseparable from the history of this malady, well comprehended that the fissural lesion is an element without importance, and he cured several patients by what he termed *cutanéol massage*. Chloroform was then unknown. He had the patient held by some strong assistants, and he introduced first one finger, then another, and so on, until he had passed his whole hand into the rectum; he then closed his fist and drew his hand from the intestine. This was a most rational operation, and the employment of chloroform in the present day permits us to practice it in a much less barbarous manner. Thus, the patient being put under the influence of chloroform, the surgeon introduces his two thumbs into the rectum, and endeavours to bring them in contact with the two ischia; at that moment one hears a strong cracking noise, and the operation is finished. The first stool after the operation is painful, but this pain is simply the result of the region being contused, and does not in the least resemble the pain which characterized the spasmodic attacks. The succeeding stools are without any pain, and the cure is assured. (*Med. Times and Gazette*).

TRACHEOTOMY BY THE GALVANO-CAUTERY.—*La France Médicale* mentions the operation of tracheotomy as successfully performed by the galvano-cautery, on a boy, *æt.* 13, who had a little pebble in the trachea for upwards of a month. The operation was thus performed by M. Amussat; a strongly curved needle was introduced through the tracheal tissue, comprising part of the windpipe itself; this needle was furnished with a stout double thread of platinum. When the needle had been passed through, the two ends of the thread were joined by being seized in a forceps which was in connection with a galvanic pile, and the section was performed by the heated wire without the loss of any

blood. The trachea was thus opened, and directly the foreign body was forcibly expelled by an excess of coughing. Since this occasion the operation has been performed frequently, viz., five times by M. Verneuil, once by Prof. Voltolini, once by M. E. Bourdon. The *modus faciendi*, however, of M. Verneuil is somewhat different—he divides the operation into three stages, and proceeds from without, inwards. 1st. He divides the skin and soft parts; 2nd. The trachea; the third stage is the introduction of the canula, the precaution chiefly to be taken being that of not injuring the posterior wall of the trachea by too hastily or too deeply entering the tube itself with the galvano-cautery. — *The Doctor.*

THE EXAMINATION OF BLOOD-STAINS.

A commission, composed of MM. Mialhe, Mayet, Lefort, and Cornil, have furnished an interesting report on this subject (*Repertoire de Pharmacie*, July 10th, 1873; *Progrès Medical*, August 23). They point out that in the present day it is no longer possible, in the examination of blood-stains in legal medicine, to rest satisfied with the physical characters observed by the naked eye. The microscope, sometimes alone, but more often associated with chemical analysis and the spectro-scope, enables us to obtain an exact diagnosis formerly impossible in a great number of cases. Two conditions may occur.

I. When the stain is of recent date, or supposed to be so, the red corpuscles should be particularly examined, and every care taken to preserve them without change. The stains must not be washed with water, so that the hæmatine may not be altered. After insisting on the microscopic characters of the blood-stains, isolated or compared with those of various animals, the commission enumerate with care the fluids which are destructive or preservative of blood-corpuscles. Among the first, water, and particularly hot water, acetic, gallic, hydrochloric, and sulphuric acids; and of alkalies, potash and soda, even in weak solution, and ether and chloroform, and many other reagents, so alter the blood-corpuscles as to cause them to entirely disappear. Alcohol, chromic and picric acids, and bichromate of potash, preserve the corpuscles, though they alter their form. The preservative fluids are those whose composition approach nearest to serum, such as the iodised serum of Schultze, an excellent preparation, made with amniotic fluid, to which are added a few drops of the tincture of iodine, so as to give it the colour of white wine; or better, a fluid composed thus—white of egg, 30 grammes; distilled water, 270 grammes; and chloride of sodium, 40 grammes; or even a fluid containing 0.5 per cent. of chloride of sodium, or 5 or 6 per cent. of sulphate of soda.

If the stains be wetted and softened by these fluids and then examined, white and red corpuscles and fibroid particles will be observed.

II. In more difficult cases, when the microscope, owing to the alterations which time has effected in the hæmatine, can give but vague information, examination by the spectro-scope and chemical analysis enable us to arrive at precise results. The use of these means, being less known and also more delicate, requires special study.

1. *Spectrum Analysis.*—Colouring matters have the power of absorbing certain coloured rays of white light—the same always for the same substance. This is the principle on which spectroscopic examination is based. If into an analysing tube filled with water a few drops of a solution of hæmoglobine be introduced till it has the colour of peach-blossoms, the luminous rays of the spectrum passing through this fluid present two bands of absorption between the lines D and E of Fraunhofer in the yellow and the green. The same fact would be observed if a few drops of blood were substituted for hæmoglobine in the analysis. In a case of doubt, the hæmoglobine of the blood could be reduced by adding to this latter a reducing body. Destroyed hæmoglobine has a different spectrum from oxygenated hæmoglobine; a single absorption-band as large as the two former bands united, and a little to the left of Fraunhofer's line D.

2. In blood in a state of decomposition, or which has been treated by acids or caustic alkalies, hæmoglobine is changed into a new substance; hæmatine is formed, which, combined with hydrochloric acid, gives characteristic crystals. In order to obtain them, we must proceed thus. A small fragment of dried blood is placed on a glass slide; it is dissolved in a drop of water, and a minute portion of sea-salt is added. It is covered with a thin slide, and pure acetic acid is made to pass between the two slides, and it is heated over a spirit-lamp to boiling point. Acetic acid is again added, and it is heated afresh, and this is repeated till the crystals are obtained. They are rhomboidal, of a dirty brown colour, quite characteristic, and require to be seen with a magnifying power of three hundred or four hundred diameters. With the smallest quantity of blood these two reactions can always be produced—the spectrum examination and the crystals of hydrochlorate of hæmatine; and they are so certain, that the existence of one alone enables one to affirm the presence of blood.

3. The third process, though not so exact as the preceding, ought nevertheless not to be neglected. If to a very small quantity of blood dissolved in a little water be added a few drops of tincture of guaiacum and of binoxide of hydrogen, a persistent blue colour is immediately produced; but this very sensitive reaction can be obtained with other organic matter, nasal mucus, saliva, etc.: it there-

fore only gives a probability. We must proceed in the following manner. A tincture of guaiacum is prepared with alcohol at 83 deg., and guaiacum resin; a mixture of sulphuric ether and binoxide of hydrogen is also made and enclosed in a stoppered bottle, and kept under water in the dark. This preparation is less liable to change than pure oxygenated water. The object stained with blood, if it be white, is put into a little cup, then moistened with water to dissolve out the blood-stain, and washed in distilled water; this water is then submitted to the action of these reagents. If the thing stained be colored, and the stain little or not at all visible, it must be moistened and then pressed between two or three sheets of white blotting paper, and tried first with the guaiacum. If the stain be of blood, a reddish or brown spot will form on the paper. One of the sheets should be treated with ammonia, and the stain will become crimson or green. A second sheet, treated with tincture of guaiacum and ozonised ether, will give a blue colour more or less intense, according to the quantity of the blood.

To recapitulate: 1. If the stains or scales of blood appear recent, the corpuscles may, after the necessary precautions, be examined under the microscope, and their presence, diameter, etc., observed, which will enable one to diagnose the origin of the blood, whether human or animal. 2. If the stains be old and the blood changed, the reaction with the tincture of guaiacum would make the presence of blood probable; but its actual presence cannot be affirmed without spectrum examination, or the production of crystals of hydrochlorate of hæmatine; one of the two is sufficient. It is unnecessary to add that these reactions do not show whether the blood is human or animal. —*Brit. Med. Jour.*

TREATMENT OF EMPYEMA BY PERMANENT OPENINGS IN THE CHEST.—At a recent meeting of the Boston Society for Medical Observation, Dr. John G. Blake reported (*Bost. Med. and Surg. Journ.*, June 5, 1873) four cases, illustrating the good results attending this mode of treatment of empyema; and in the discussion which followed, Dr. H. I. Bowditch stated that he highly approved of Dr. Blake's fearless method of operating in these cases. He thought it was wrong to allow a patient to cough up a secretion which could be allowed to escape so easily. Those cases where the matter is allowed to be expectorated are, as a rule, long and tedious. The operation, on the other hand, tends greatly to hasten convalescence, and, though his experience of incision has been small, Dr. Bowditch believed that it could be done with less danger to the patient than to allow him to continue coughing without making an opening. Dr. Bowditch would urge an incision just as we would open an abscess in the thigh. After using

the aspirator on one or perhaps two occasions, in order to make sure of the existence of pus and of its tendency to reaccumulate, a free opening should be made, and no half-way measures in regard to the establishment of such openings should be adopted. In one case which he had seen, the very happiest results had followed a three-inch incision.

In cases of pleurisy, there are occasional attacks of orthopnoea or dyspnoea, lasting perhaps fifteen minutes, which are followed by an interval of perfect relief. The dulness is found to extend only half-way up the chest, and the examiner thinks there is less fluid than really exists. In these cases sudden death from orthopnoea may at any moment occur, and therefore in all such cases an operation should be immediately performed by aspirator or incision. (*Med. News and Library.*)

Medical Items and News.

Dr. Dalrymple, M.P. for Bath, England, died on the 19th of September. Our readers will remember that Dr. Dalrymple lately visited the United States, to inquire into the working of the Inebriate Asylums there. This was a question in which he took a deep interest

The International Medical Congress met this year in Vienna. The session commenced September 1, with a speech by the Archduke Rainer, in which His Imperial Highness welcomed the visitors to Vienna. The chair was taken by Professor Rokitansky as President, who delivered an address. Special discussions afterwards took place on subjects of sanitary science and general professional interest.

LARGE BRAIN.—An inquest was lately held by Dr. Lankester, in Paddington, England, on the body of a boy 6 years of age (son of a porter), whose brain weighed, on examination, 53oz. Deceased was described as a very clever boy. He was preparing for school in the morning, when he was suddenly seized with pain in the stomach, and died about 12 noon. The cause of his death was apoplexy of the lungs.

MARRIED.—In Belleville, October 8th, by Rev. W. S. Patterson, Baptist clergyman, G. W. Faulkner, Esq., M.D., C.M., L.C.P.S.O., Stirling, to Miss S. A. Young, third daughter of the Rev. Sheldon Young, member of the Bay of Quinté Annual Conference of the Methodist Episcopal Church.

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Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Advertisements inserted on the most liberal terms. All Letters and Communications to be addressed to the "Editor Canada Lancet," Toronto.

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WHITHER ARE WE DRIFTING.

Our last issue contained no less than four letters from correspondents, complaining of various shades of departure from honorable professional conduct. The frequency of these appeals would make us question the universal application of the quotation,

"Ingenuas deducisse fideliter artes
Emollit mores, nec sinit esse ferus."

more particularly as from the alphabet of letters affixed to the names of some of the parties complained of, we should be justified in presuming that a long study of a liberal profession (which alone we should imagine could have supplied the string of titles,) had necessarily resulted in a cultivated mind, and with that the other requisites for constituting a gentleman. We had hoped that the more medicine became cultivated as a science, the less it would be practised as a mere road to a living, competence, or ephemeral reputation; that with the exit of the mountebank at the fair, quackery, pure and simple, had passed away. It would appear, however, that we had indulged in an optimist mood, and that now, as of yore, we have too much reason for admitting

"Populus vult decipi, et decipitur."

Perfectibility would simply be an utopian dream, as it would be founded on a radical ignorance of human nature. But we have surely a right to expect that the general increase of intelligence and sound medical education would to some extent afford protection from the degree of empiricism prevailing in the last century.

The communication from Tara, of last month, requires more than a passing comment. If the facts are substantially as narrated, the coroner's conduct

is such as to demand a thorough investigation, and if proven, instant dismissal from office. This official may probably urge that it can never be wrong to follow conscience, let it lead to what it will, and believe, with Barrow and other casuists, that "a conscience, however erroneous, obliges;" but although it is true that a man must follow his conscience when made, the question returns whether he may not have had a trifle to do with making it; whether the desire to crush and disgrace a rival had not been one of the impelling forces. Bentham, in his book of fallacies, thus discourses of the self-trumpeter's fallacy: "There are certain men in office who, in discharge of their functions, arrogate to themselves a degree of probity, which is to exclude all imputations and all inquiry. Their assertions are to be deemed equivalent to proof, their virtues are guarantees for the faithful discharge of their duties, and the most implicit confidence is to be reposed in them on all occasions."

The office of Coroner or Attorney for the Queen is too sacred to allow its prostitution, and we cannot imagine that the gentleman charged with malversation of office will quietly submit to the censure that must necessarily follow Dr. Washington's letter, if the accusations are susceptible of disproof. Only in the case in which a man has impartially dealt with evidence is he blameless; and blameable, much or little as he has deviated from that standard. Coronerships are not presumed to be given as a means of eking out an existence, much less as a tyrannous power.

The case referred to by the correspondent from St. Jacobs, and another by an inquirer,—so full of the milk of human kindness that he refrains from giving the name of the offender,—may perhaps be viewed as a belief on the part of these *soi disant* medicos that singularity fills the general run of mankind with wonder, and from wonder to admiration the transition is easy: or a belief that by any means "*Il faut vivre.*" To such individuals the reply reported to have been made on one occasion to an individual thus speaking, guilty of a breach of moral honesty, by Talleyrand, "*Je ne vois pas la nécessité,*" would be peculiarly apposite.

It might be deemed presumptuous to offer advice to gentlemen who, for seven years, have never lost a case of cancer, croup, quinsy, erysepelis, bronchitis, cholera, &c., &c.; but at the risk of being held officious, we will copy for their benefit part of a

letter addressed to a young physician about a hundred years ago, even now however applicable to their standard of the eternal fitness of things, by the celebrated court physician, Dr. Mead. The entire letter is such a biting satire on the unprofessional device of that, and this day, that we regret having to abridge it. The curious may find it in a work published more than thirty years ago, entitled, "Physic and Physicians."

"That which gives me great hopes of you, Dr. Timothy Van Bustle, M.D., M.R.C., &c., &c., is your resolution to go on and push into practice at all hazards. You know *audaces fortuna juvat*, the more you search the less you will be satisfied; and when arrived at the top of all, you may, with Solon, conclude that all your wisdom (comparatively with real knowledge) is in knowing nothing,—whereas, if you only skim the surface, you will go boldly on and fancy your knowledge ten times more than what it really is. Thus, then, the great and principal thing you ought to be qualified with is the *formula prescribendi*; for form is now the main chance, whether in law or physic, and without that there is nothing to be done; this is the business, the alpha and omega, the all in all; some will succeed and some won't; 'tis hit or miss, luck's all, you are paid, go which way you will. And now you are arrived in town, the first thing I advise you to do is to make all the noise and bustle you can, to make the whole town ring of you if possible, so that every one in it may know that there is such a being, and here in town, too, such a physician. It signifies little which way it be, so it be done, and that your name be known and heard of. A very famous oculist has told me that he must starve did he not frequently put himself in the public prints. The old and the simple, the riotous, the whimsical and the fearful are your most proper company, and who will provide you with the most business, there being far less to be got by the wise and sober. If your wife should happen to mind business in her way, it will certainly also increase yours. Let your religious and political opinions swim with the tide, especially when fashionable. Let not your fingers be sacrilegiously defiled, but be very gentle of taking fees of the clergy. Don Quevedo is of opinion, that the best way to run into business, is to run into debt, because your creditors will employ you to get paid. As to putting this experiment into practice, I shall rather choose to leave it to your

own natural genius to direct you therein, than much to persuade you thereto, since there may be danger should it not succeed. The last thing I advise you to do, is to get acquainted and cheerfully to keep company with all old women, midwives, nurses, and apothecaries, as they will be entertaining you in the way of your business; and as the old ladies are most subject to ailments, they will be acquainting you with the same, consequently you are to make the most of it, and never to make light or slight the least complaint."

BLOODLESS OPERATIONS.

The method recommended by Dr. Esmarch, of Kiel, for preventing hemorrhage during operations is likely to prove of great value to the profession. It has been tried in many of the hospitals in Great Britain and Germany with great success. The plan consists in bandaging the limb about to be operated upon from the extremity upwards a short distance above the seat of operation, with a strong elastic bandage applied so tightly that all the blood is forced out of it. A strong rubber band fastened with steel clasps is then twisted firmly round the limb just above the bandage, the latter is then removed and the operation proceeded with. The application of the elastic bandage renders the limb quite exsanguine and the rubber band arrests further circulation in the limb, so that the operation may be proceeded with, almost without the loss of a single drop of blood. Prof. Billroth, of Vienna, has tried it in fourteen cases, in twelve of which the result was complete and successful, the cause of failure in the other two cases being the difficulty of properly applying the apparatus so as to exercise sufficient circular compression; one of these cases was disarticulation of the femur at the hip and the other an operation for the relief of deformity, arising from a burn. Operations have also been attempted without chloroform under the supposition that local anaesthesia as well as local anemia might be produced by the constriction, but so far these experiments have not been satisfactory, the pain of the operation being distinctly felt by the patient. It has been suggested, however, that further experiments in this direction should be made. The plan of Esmarch has been put in operation in St. Thomas' Hospital, London, England, by Dr. Mc-

Cormac and others with similar results to those above mentioned. Amputations, excisions and operations for necrosis have been successfully performed, not a drop of blood appearing in the wound during the entire period of the various operations. This plan of operation seems admirably adapted to cases in which the system has been much reduced by previous disease and where the loss of even a small quantity of blood may prove destructive of the patient's life. By thus husbanding the vital fluid the patient is in a much more favorable condition for rapid recovery after the operation, than when it is conducted in the ordinary way, with the necessary loss of more or less blood, and consequent diminution of the vital forces of the body. It is a valuable improvement and cannot fail to come into general use, and the profession owe a debt of gratitude to Professor Esmarch for bringing it so prominently under their notice. The only exceptional cases in which it might be dangerous to apply the elastic bandage are those where amputation is performed for gangrene, or where septic abscesses exist. In these instances some of the poisonous material might be forced into the circulation and be attended with disastrous results. The plan of Esmarch will be found very suitable for the removal of vascular tumors when situated in the extremities, and especially when surrounded by important vessels. The profuse hemorrhage by which the various steps of the operation are usually much obscured will in this way be almost wholly avoided, and the safety and expedition of the operation greatly facilitated. We hope soon to hear of its being tried by some of our own surgeons, when we will be in a better position to speak positively as to the results.

ALLEGED MALPRACTICE—NONSUIT.

At the late assizes in St. Catharines, an action was brought against Drs. Cross and Downey to recover damages for alleged maltreatment of a case of fracture of the forearm. The plaintiff (Theal) received a fracture of both radius and ulna about the middle third, by being thrown from a wagon. The fractured arm was adjusted by Drs. Cross and Downey in the usual way, and the patient sent home, some distance from town, and was told to come in occasionally. This he did at

first in an irregular way, but soon ceased, and from want of care on the part of the plaintiff some displacement took place during the process of consolidation, and the result was a slight degree of angular deformity. He had very good use of the arm, pronation and supination being quite perfect, and he returned to his occupation (a boiler maker.) Some particular friend seeing the case told him that there was more deformity than there should have been and that there was good cause for action. He immediately discovered that he could not use the arm so well, and went about till the time of trial with a quasi helpless arm. At the trial the plaintiff gave his testimony by which he tried to make it appear that the Drs. were guilty of neglect and unskilful treatment. His wife and brother-in-law were also examined with a view to support the evidence of the plaintiff.

Dr. Lemon, also called by the plaintiff, said that Theal called upon him; did not examine the arm carefully, but said it was a poor job; had since examined it more carefully and still thought it a poor job; there was greater deformity than usual in a simple fracture of the forearm; the bones were not now in apposition; had lately measured the arm and found $\frac{3}{4}$ ths of an inch shortening; there had been imperfect treatment by somebody; the result showed this; had treated over a dozen fractures of these bones, mostly green-stick fractures (!) After fracture the arm is not always perfectly straight; but he had had no shortening in his own practice. If the bones are properly set they will remain so in this kind of fracture. In this case he believed that had the Drs. adopted the usual course there ought to be a better result.

Dr. Berryman, called—had seen a good deal of surgery at the Toronto hospital; would not put up a fracture immediately; when both bones of forearm are broken thinks it a good result when there is supination and pronation; thinks this a crooked little affair; the only point, he believed was, that it was said the arm was not examined for three weeks.

Dr. Mack was next called—plaintiff came to his office and said he had something to show him; he demanded his fee before he looked at it; then said he could not say whether the treatment had been proper or not; cannot say there was any want of skilfulness; but the result is unusually

bad; the practice pursued would have been adopted by 9 out of 10.

This was the case. The judge (Justice Morrison) at once decided there was no case for the jury, and no need of defence.

Drs. Cross and Downey had called for the defence a number of medical gentlemen, among them Dr. Fraser, an old practitioner of the neighborhood, Drs. Hodder and Canniff, of Toronto, and particularly Dr. Frank Hamilton, of New York. All of these gentlemen were prepared to swear that, taking into consideration the nature of the injury—the crushing force—the bones involved, and other circumstances, that the result was unusually good. They had no opportunity of closely examining the arm; but its appearance and the manner in which he used it when showing it to the Court, were sufficient to satisfy them on this point.

The kindness of Dr. Hamilton in coming, and his patience in waiting some days are worthy of great praise.

“A correspondent says he cannot understand the use of yearly taxation of members of our profession to pay examiners of students. Any person seeking a Degree in Medicine should be charged sufficient to remunerate his examiners. There are too many already in the profession, not a country village with fifty or a hundred inhabitants, that has not two or three physicians; and as for small towns and cities, their name is legion. I would also ask, what has Registration done for us? we had to pay five or ten dollars for being registered, and got no protection from empiricism, which is rife than ever in our country, and we are liable for damages in suits for mal-practice, while the quack goes scot free. I wish you would explain more fully what you think of this taxation. If it was for the support of the widows and orphans of our brethren, I would willingly say put it on, and God speed you, but to pay to glut the market with more members of our profession I decidedly object.”

In regard to taxation, we believe it to be necessary to the carrying out of the Medical Act. The amendments are, as a whole, a great improvement on the old law, being much more rigid in their action against quackery. If, from want of proper support, the present act becomes a dead letter, then will the country be over-run with every species of

empiricism. Before the present act came into force, there were about 180 students licensed annually, and turned loose upon the community, and the crowding our correspondent speaks of is the result of this former state of affairs. Since the act came into force there has been an average of from 50 to 55 candidates only, who have passed at the annual examination, and are legally entitled to practice in Canada. This of itself shows a decrease of nearly 75 per cent. as the result of its working, and, in addition to this, not one solitary Homœopath or Eclectic has been licensed during this period. The tax is very light, and will be the means of strengthening the hands of the Council in the work before it. At present it is too much at the mercy of the students, who, if they choose, (and they have threatened to do it) may refuse to go up for examination, and thus defy the Council, and by cutting off its only source of revenue, completely swamp it. Now will the profession look coldly on while this is being done? and done it will be, sooner or later, if things are not rectified. We trust there will be no opposition to the measure, but that all may see that it is the only means by which we can hope to keep within reasonable limits the number of aspirants to an already overcrowded profession.

A medical man, resident in Toronto, and having a large family, has, through no fault of his own, become very much embarrassed pecuniarily. In England it has been customary in such cases to show in a practical manner, a feeling of professional brotherhood, by sending contributions through the agency of some of the medical journals. It has been suggested to us to make a similar appeal for aid. Through motives of delicacy towards our unfortunate brother, we have withheld his name. We can say, however, that dishonored paper which he had endorsed, and not any dissipation or other extravagance, has caused the misfortune, which he hopes to surmount by timely aid; and were it not for a physical infirmity, which has kept him back, he might have been able to have met his friend's (?) liabilities without making this appeal. We shall be happy to receive, acknowledge and forward all contributions sent to us.

GALVANISM IN POST-PARTEM HEMORRHAGE.—The application of galvanism in obstinate cases of post-parTEM hemorrhage, and the successful results which

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