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Publishers' Department.

List of Advertisers.

LITHIASIS IN BOYS.—In Hungary children suffer not infrequently from stone, and I have seen ten cases, varying in age from two and a half to twelve years. I advocate suprapubic cystotomy in these, as it is an operation that requires no special skill, is very easy in children, and even safer (though the time in bed is somewhat longer) than litholapaxy. The bladder heals very readily in young subjects, and should be at once sutured completely with silk, no drainage being needed. The only special source of difficulty is the great reflex excitability apt to appear, which may prevent the bladder being properly distended; a low insertion of the peritoneum may also complicate the operation. I have never had any

Therapeutic Suggestions

How To Treat a Cough

In an able article under the above heading in the *New York Medical Journal*, Edwin Geer, M. D., Physician in Charge of the City Hospital Dispensary; also Physician in Chief, Outdoor Department, Maryland Maternité Hospital, Baltimore, writes:—

"The object of this brief paper is not to try to teach my colleagues how to treat a cough, but simply to state how I do it, what good results I get, and to call their attention to those lighter affections of the throat and chest the principal symptom of which is an annoying cough, for which alone we are often consulted. The patient may fear an approaching pneumonia, or be anxious because of a bad family history, or the cough may cause loss of sleep and detention from business. What shall we do for these coughs? It has been my custom for some time to treat each of the conditions after this general plan: If constipation is present, which is generally the case, I find that small doses of calomel and soda open the bowels freely, and if they do not, I follow them with a saline purgative; then I give the following:

℞ Antikamnia and Codeine Tablets, No. xxx.
Sig.: One tablet once every four hours.

"The above tablet contains four grains and three-quarters of antikamnia and a quarter of a grain of sulphate of codeine, and is given for the following reasons: The antikamnia has a marked influence over any febrile action, restores natural activity to the skin, and effectually controls any nervous element which may be in the case. The action of the codeine is equally beneficial, and in some respects enforces the action of its associate. The physiological action of codeine is known to be peculiar, in that it does not arrest secretion in the respiratory or intestinal tract, while it has marked power to control inflammation and irritation. It is not to be compared with morphine, which increases the dryness of the throat, thus often aggravating the condition, while its constipating effect is especially undesirable."

The London Lancet's Endorsement

"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, lagrippe, etc. It is a white powder of a slight bitter taste and alkaline reaction. It is not disagreeable to take, and may be had either in powder or tablet form, the latter in five-grain size. It is described as not a preventive of, but rather as affording relief to, existent pain. It appears to exert a stimulating rather than a depressing action on the nerve centers and the system generally."

trouble with stitches, and do not think they should ever require removal. Stones are sometimes impacted in the urethra, whence the simplest mode of dislodgment is a prolonged warm bath, which is often effective alone. In one of my cases a peri-urethral abscess formed, which, when cut down upon, was found to contain the stone; in another the concretion was removed by urethrotomy; in a third it was extracted from the cavernous urethra by supra-pubic cysttotomy. In the two latter cases retention and dribbling had persisted for some days, and the bladder reached nearly up to the umbilicus.—*Schweigger, in Wiener Medicinische Wochenschrift.*

PRESCRIBING FOR CHILDREN.—From prescribing drugs which they seldom see, practitioners are apt to overlook the nauseousness of the unsuitable bulk and consistence of the materials they employ. This is of importance in regard to children. Certain flavors which are very unpalatable may be easily disguised, as scammomy and castor oil with milk, senna with chloric ether, and decoction of aloes with liquorice. Of certain drugs the saccharine preparation should be selected; to others sugar, or the infusion of roses or cloves, may be added. Bulky powders should be avoided, and the dose of fluids should not exceed one or two drachms. There is a legitimate distinction to be drawn between the medication of children and the medication of adults. To the child the process can hardly fail to be grievous; it never affects his imagination except unfavorably. With the adult the taking of medicine always excites a pleasing hope, and no one can doubt that, in some instances, the mere belief in it is of itself salutary.—*Clinical Medicine.*

POST GRADUATE COURSE

McGILL UNIVERSITY

Montreal

Faculty of Medicine

A Special Course of Instruction for General Practitioners has been Arranged by the Members of the Faculty of Medicine of McGill University

This Course begins **TUESDAY, MAY 4th,** and closes about **JUNE 19th, 1897.** It will consist of:

(a) Evening Lectures

Four per week, on the recent advances in Medicine and Surgery by Professors Wm. Osler, Wm. Gardner, Roddick, Stewart, Shepherd, Mills, Bell, Adami, Lafleur Finley, Armstrong, and others.

(Prof. Osler's course will consist of four lectures on Diagnosis of Abdominal Tumors.)

(b) Regular General Clinics

Four per week, on groups of cases in the Medical and Surgical Wards of the Montreal General and Royal Victoria Hospitals. These will be conducted by Professors Stewart, Shepherd, Bell, Blacakder, Wilkins, Finley and Lafleur.

(c) Regular Clinics on Special Departments of Medicine and Surgery

In Ophthalmology, Otology and Gynæcology, two per week. In Dermatology, Genito-Urinary Surgery, Orthopedics, Laryngology and Pediatrics, one per week, conducted by Professors Buller, Wm. Gardner, Shepherd, Birkett, Bell, Alloway, and others.

(d) Special Demonstrations

One or more as required, on modern treatment of Diphtheria (Hospital for Infectious Diseases), Pelvimetry and Aseptic Midwifery (at Maternity Hospital), Mental Diseases (at Verdun Asylum), Medico Legal Autopsy Methods, etc., by Drs. J. C. Cameron, Wyatt, Johnston, Burgess, and others.

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For which a small extra fee will be charged to cover the cost of material, will begin in Operative Surgery, Clinical Bacteriology, Clinical Microscopy of Dejecta and Blood, Clinical Chemistry and Post Mortem Methods, by Professors Armstrong, Adami, Ruttan, Martin, Wyatt Johnston, and others.

(f) Laboratory Demonstrations

On the Physiology of the Circulation and the Nervous System, Morbid Anatomy, Medical and Surgical Anatomy, Microscopical Methods, Urinalysis, Serum Therapy Serum Diagnosis of Typhoid, etc., by Drs. Wesley Mills, Ruttan, Wyatt Johnston, Martin, Elder, Morrow, Gunn, and others.

The above Course of Instruction is given wholly apart from the regular Lectures, Clinics, etc., for undergraduates in medicine.

The Fee for the Full Course, Including Hospital Fees, $50.
The Fee for the Course of 24 Lectures Alone (Evening), $10.
For Any Set of Six Lectures, - - - - - - $5.

Practitioners who purpose attending this Course may obtain time-tables and fuller details on application to

PROF. R. F. RUTTAN, Registrar,
Faculty of Medicine.

KINETOGRAPHIC PHOTOGRAPHY OF THE HEART.—Lechner's kinetograph allows twenty-five, thirty or more photographs to be taken in the course of a second, and is of great assistance in studying the activity of the heart. Braun has been using it to photograph the movements of the heart of a dog that was still continuing its beating. They were reproduced with absolute fidelity, and when enlarged showed certain details in the cardiac transformations that have always escaped the eye on account of the rapidity of the movements.—*Bulletin Méd.*, December 20.

THE DAVY-FARADAY RESEARCH LABORATORY.—The Davy-Faraday Research Laboratory of the Royal Institution presented by Dr. Ludwig Mond was opened by the Prince of Wales on December 22nd. The ceremony was attended by a large and distinguished audience. Dr. Mond in an address recalled that a movement had been set on foot half a century ago to found an institute for the pursuit of pure science. This movement had the support of the late Prince Consort, and it was at first proposed to attach the new institute to the Royal Institution. This part of the scheme had to be abandoned owing to the want of space, but the movement resulted in the foundation of the Royal College of Chemistry. That part of the scheme, however, which proposed to provide a place where original researches could be carried out by independent investigators had not been realized. The Davy-Faraday Research Laboratory would supply this deficiency, and would be the only public laboratory in the world devoted to research in pure science. The Prince of Wales, in reply, expressed his gratification in being able to assist at the opening of the series of beautifully arranged and

well equipped research laboratories which this country owed to Dr. Mond's generosity. The fact that the present distinguished professors of physics and chemistry at the Royal Institution—Lord Rayleigh and Professor Dewar—had undertaken the duties of directors of the new research laboratory without remuneration was evidence of the faith felt by them in the benefits which would result to science from Dr. Mond's wisely applied munificence. The laboratories occupy the house in Albemarle Street next door to the Royal Institution, and include, in addition to the working rooms, a large library and a museum of apparatus.

A PHYSICIAN AND HIS PATIENT IMPOSED UPON BY A DRUGGIST'S SUBSTITUTION.—I gave Sanmetto to Mrs. H., aged twenty-eight years, for frequent micturition and tenderness in region of kidneys. Patient was compelled to rise four or five times during the night, passing nearly a half gallon of urine during this time. After using a bottle of Sanmetto she was greatly relieved, but instead of getting more Sanmetto as I directed, patient was induced by her druggist to get a preparation of palmetto; this had no appreciable effect whatever. Patient is now using Sanmetto and is not likely to be imposed upon again.

W. OCELLUS HARTSHORNE, M.D.
Cross, Okla. T.

FOR CORNS—

Painted on the corn night and morning for several days, when the corn will, as a rule, come readily away:

℞ Acid. salicylici ..... 30 grs.
Ex. cannabis ind .... 10 grs.
Collodii..... 4 fl. drs.
M. —*Medical Record.*

SAMPLE box of UNGUENTUM RESINOL received, for which thanks, I at once tried it on an aggravated case of Herpes Zoster. The effect was magical, it gave instant relief of pain and reduced the size of the blebs in fifteen minutes; total obliteration after third application in less than sixteen hours.—*F. V. C. Fuller, M.D., 110 St. James Place, Brooklyn, N.Y.*

A DESERVED EUROPEAN INDUCEMENT.—*Health*, a weekly journal of medicine and surgery, diet and sanitary science, London, Eng., says editorially: "We have received from the Antikamnia Chemical Company, St. Louis, Mo., U.S.A., a brochure dealing with the action, history, indications and administration of their preparation, antikamnia. There is no remedy so useful and attended with such satisfactory results in the treatment of melancholia with vaso-motor disturbances, anæmic headaches, emotional distress, and active delusions of apprehension and distrust; and it also increases the appetite and arterial tension, and promotes digestion, as well as being particularly serviceable in relieving the persistent headaches which accompany nervousness. In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, it is of peculiar service. In angina pectoris this drug has a beneficial action; it relieves the pain and distress in many cases, even when amyl nitrate and nitro-glycerine have failed entirely. In pseudo-angina, frequently observed in hysterical women, its action is all that can be desired. To patients who suffer from irritable or weak heart, needing at times a pain reliever, it can be taken without untoward after-effects, knowing that the heart is being fortified. It increases the

elimination of urea and purifies the blood without increasing the destructive tissue metamorphosis. It lessens coma and loud delirium by contracting the capillaries of the brain. In delirium tremens, it relieves when there is great restlessness with insomnia, as well as general lowering of the nervous power."

TREATMENT OF PURULENT RHINITIS.—Dr. Homer Coulter (*Chicago Med. Recorder*) recommends cleanliness first, last, and all the time as a necessity. He prefers the ordinary alkaline solution modified approximately as follows:

℞ Sodii bicarb..... ℥ss.
Sodii biborat . .... ℥ij.
Acid carbolic ..... gtt. xxv.
Glycerini ..... ℥j.
Aq. rosæ ..... ℥ij.
Aq. dest.....q.s. ad Oj. M.

Sol. Use freely night and morning in an atomizer.

After first thoroughly cleansing the cavities with the above, he introduces some such solution as:

℞ Eucalyptol..... gtt. v
Thymol .....a..... gr. ij.
Campho-phenique .. ℥ss.
Sabalol.....q.s. ad ℥iij. M.

Sol. Use night and morning after solution No. 1.

Without a thorough cleansing of the cavities any medicament would be practically useless, and it would scarcely reach the mucous membrane through such a muco-purulent coating.—*Pediatrics.*

ON the fence of a western ranch is pasted the following: "If any man's or woman's cow or horse breaks through this fence and destroys the grain, his or her tail will be cut off, as the case may be. I'm a Christian man, but d—n any one that lets their critters run loose o' nights."

A CASE OF FATAL HYSTERIA.—The *Ravista Med de Sevilla* for October contains the description of the case of a young woman who, after a brief married life and separation, was atacked with all the "algias" known to science, with functional disorders in every organ and phantom tumors, etc., a most distressing case which was diagnosed as hysteria. This diagnosis was confirmed when after years of suffering the patient dreamed that if she received the communion she would be freed from her troubles, as proved to be the case. It was the first time anything had passed into her stomach for weeks, as a constriction in the œsophagus had prevented her taking food. This miracle of her complete restoration to health continued for some months, when her former state returned in an aggravated form, accompanied by serious gastro-intestinal disorders and a peculiar pigmentation of her face, as if she had been tattooed with blue paint; fever and complete insomnia rapidly terminated her life.

WARM weather is distressing, debilitating. It requires great exertion to accomplish one's daily duties. We have found much relief by using a little of POND'S EXTRACT in a bowl of water. It is a positive luxury. It revives, invigorates and freshens the face or person, and wonderfully improves the complexion. We caution our readers against imitations. Get the genuine.

A GARGLE FOR FOLLICULAR AMYGDALITIS.—Levy recommends the following:

℞ Creasote ..... 8 drops.
Tinct. of myrrh,
Glycerine ...āā 900 grains.
Distilled water, 1800 grains.—M.

—*New York Medical Journal.*

JUBILEE OF DR. THEODORE ROUSSEL, OF PARIS.—The beautiful custom of celebrating the fiftieth anniversary of prominent persons with appropriate ceremonies and speeches is more customary abroad than in this country, where we usually wait until a man is dead before we express our appreciation of him and his services to mankind. Dr. Roussel's jubilee was celebrated with great brilliancy by a grand meeting in a large hall presided over by the Minister of the Interior, and the addresses were brilliant homages to the work accomplished by this well-known physician, senator and hygienist. The laws for the protection of unfortunate children from infancy to maturity are recorded as the Roussel laws, and the deliverance of the country from pellagra, which still devastates the fairest provinces of Italy, is another debt France owes to Roussel. He remarked in his response that this jubilee was not the festival of a single man, but rather the rejoicing at the culmination of the collective labors of many at home and abroad, which have resulted in laying a firm and broad foundation for the "protection of unfortunate childhood."

RHEUMATISM.—Dr. M. T. Richardson, of Piedmont, S.C., sends the following prescription to the *Medical World:*

℞ Liq. potass. arsenit... ℥j.
Potass. iod ..... ℥iij.
Sodii salicyl..... ℥iv.
Tr. gent. co.,
Elix. lactopep.....āā ℥j.
Syr. sarsap. co..q. s. ad ℥iv.

M. Sig.: Shake well. Teaspoonful three times a day after meals in one-third glass of water.

INVETERATE METRORRHAGIA.—Petit (*Progres Medical*) holds that gynæcologists are often mistaken in using the curette as a remedy for metrorrhagia, relying on the pathological theories of others that the bleeding is due to disease of the uterine mucous membrane. In a case under his own care he used the curette repeatedly, but the bleeding went on as before. The uterus was removed and extensive changes were found in the muscular coat as well as in the tubes and ovaries. The changes represented angio-sclerosis. It is not stated whether they might not yield to less severe remedies than hysterectomy.

OPINIONS ON QUALIFICATIONS OF EXPERTS.—One who has personal knowledge of the qualifications of an expert, the Supreme Court of Michigan holds, People v. Holmes, December 24, 1896, may speak to the fact, based upon such knowledge; but reputation cannot be shown, nor can an opinion as to the qualifications of an expert be based upon reputation. Thus, to ask a medical witness whether he regards another one as good authority, the court declares objectionable, on the ground that the opinion called for might be based upon mere reputation. Nor does the court think it proper to attempt to show the effect of an injury upon a person's mind by showing the effect of a somewhat analogous injury on the mind of another person.

PLURAL BIRTHS IN MASSACHUSETTS.—During 1896 there were one thousand four hundred and seventy-two twins and twenty seven triplets recorded in Massachusetts.

THE Dominion Medical Monthly
... AND ...
Ontario • Medical • Journal

Vol. VIII. TORONTO, APRIL, 1897. No. 4

ORIGINAL ARTICLES.

[No paper published or to be published elsewhere as original, will be accepted in this department.

NASAL POLYPI.

By GEO. ARCHIE STOCKWELL, M.D., F.Z.S.

Properly the term "nasal polypi" is employed to describe myxomata or mucous tumors found within the nasal fossæ. By "nasal fossæ" are understood the two chambers, separated by a septum, limited in front by the so-called "anterior nares" or openings of the nose, and at the back by the "posterior nares" or openings into the upper pharynx and naso-pharynx at the posterior border of the septum.

Almost all tumors found within the naso-pharyngeal cavity proper are fibrous or fibro-mucous polypi, having a structure more or less dense and hard; and the great majority of growths found in the nasal cavities are mucous polypi. Papillomata, enchondromata, osteomata, and other tumors of the nose are exceedingly rare, and consequently need not be commented upon in this connection.

The term, nasal polypi, indicates the habitat of the tumor; and likewise, its fanciful resemblance to the group of radiates or zoophytes peculiar to the animal kingdom that bear the title of *polyps*. These growths vary in size from a small pea to a marble, or larger, and are generally attached by pedicles, though sometimes they are also found of sessile nature. In the main, too, they are more or less pear-shaped, or, as Dr. Markham expresses it, resemble in form, color and consistency the "expressed pulp of the grape." Sometimes, however, very odd and irregular shapes are assumed, more especially when two or more coalesce at an early stage of their existence, ultimately developing as a single growth. The last kind, nevertheless, is of somewhat rare occurrence.

The bony walls of the nasal cavities and naso-pharynx are lined with a fibrous layer which has all the functions of periosteum, the superficial stratum alone being mucous. The former is thicker and more fibrous at the base of

the skull in the upper part of the naso-pharynx; consequently the origin of fibromata generally is there. In the vault of the nasal cavities, where the termini of the olfactory nerves are spread out, this membrane is thin; upon the septum, and also the floor of the nasal passages, the membrane is not of marked thickness or development; consequently, neither of the places is often the seat of polypi.

The mucous membrane covering the turbinated bones—especially the middle turbinated—and the meatus which they overhang, is decidedly thickened and vascular, and here acinous glands are abundant. Beneath the superficial layer of mucous membrane is found connective tissue. Upon the surface epithelium are *cilia*, which vibrate toward the posterior nares and serve as strainers for respired air. Here, again, where the mucous membrane is thick and vascular, is found the source of nearly all mucous polypi, and, like all such growths, they partake of the character of the material from which they spring.

Regarding the history of these growths, Leiter remarks: "They are localized hypertrophies of mucous membrane which has undergone myxomatous degeneration;" a statement echoed by Hartmann. Billroth says they retain the elements of the mucous membrane from which they spring, the glandular element sometimes predominating, sometimes the connective-tissue element. Gross employs nearly the same words as Leiter. Lefferts corroborates these statements in the following words: "They are enlargements of the acinous (grape-like) glands, with attendant hypertrophy of submucous tissues, and covering mucous membrane with serous infiltration, so that the membrane is pushed or drawn out by the gradual increase of the growth—in other words, localized hypertrophy."

Regarding the site of polypi: Careful examination of statistics and the observations of various writers reveal that growths of this character positively never arise from the vault or floor of the nasal cavities; that they are of extremely rare occurrence in connection with the nasal septum, are seldom or rarely connected with the inferior turbinated bone, and generally spring from the superior meatus, middle turbinated bone, and middle meatus.

The first statement is based upon the fact that careful examination of voluminous (periodical as well as text-book) literature of the past half-century fails to reveal a single case. This is of especial interest in connection with the causes which produce them, of which more further on.

Of the second, authors are generally reserved in opinion; but the discovery of seven cases recorded is evidence of the possibility of such occurrence.

Of the three last, the middle meatus is the region most frequently infested. But before citing further evidence in this connection, permit me to call attention to a few essential facts.

It must be remembered the middle meatus is situate beneath the overhang of the middle turbinated bone, and that in this is found the gap or opening known as the *hiatus semilunaris;* that into this hiatus the maxillary sinus has its outlet, as have also, through the infundibulum, the frontal sinuses and inferior cells of the ethmoid. In other words, very nearly (or perhaps quite) nine-tenths the area of the air spaces or cavities surrounding the nasal passages open into this middle meatus.

Zukerkandl, in thirty-nine autopsies, determined the nasal fossæ as the exact seat of forty-two polypoid growths or series of growths. Of these, fourteen originated at the edge of the *hiatus semilunaris*, eight at the outlets of the cavities opening into the *hiatus*, ten in the middle meatus proper, and four from the middle turbinated bone. In short, 85.7 per cent. originated in the region of the middle meatus or middle turbinated bone.

Polypi, when found attached to the nasal septum, an exceedingly rare occurrence, as before remarked, are almost invariably adherent to the posterior portion thereof, and in the erectile tissue area so ably described and demonstrated within the last quarter of a century by the late Professor Bigelow, of Harvard.

The period of life during which nasal polypi appear is generally given as between the ages of sixteen and seventy. Regarding the latter, I may be permitted to express some doubt, since senility is not favorable to such growths, and, when discovered, they are probably of some years' standing. As regards the former, Ingalls, of Chicago, some years since recorded a case in which the polypi originated in the thirteenth year. Morell Mackenzie, giving the statistics of two hundred cases, never encountered a polypus in individuals under sixteen years of age. Bosworth reports but two cases in adolescents—one, however, at the precocious age of eleven years, the other in her fifteenth year. Mason reports just one at twelve years.

Strangely enough, the first case that came under personal observation was that of a German lad in his fourteenth year; and the first presented to my brother, Dr. Charlie Bliss Stockwell, was that of a boy only eleven years and three months old; and the attention of the parents was called to it by the fact that the growth was about protruding from the anterior nares. Neither of us have since observed a case in a person of less than eighteen years of age.

As to sex, careful comparison of statistics reveals that males are much more prone to the disease than females, the proportion being 67 per cent. in favor of the former.

Again, with regard to frequency of occurrence: Zukerkandl—who, so far as I am aware, is the only person who has manifested sufficient interest in the pathology of nasal polypi to undertake autopsies with the especial view of adding to our stock of information regarding such growths—declares that he found polypi in an average of one of every eight post-mortems.

Almost invariably nasal polypi appear in clusters and in both fossæ: Authors universally unite in the declaration that a single polypus is of such rare occurrence as to be almost phenomenal, and I know of no reason for combating or criticising the statement.

In reviewing the character of polypi, and their effects as produced upon the human economy, it is discovered their relations are of more especial interest to general practitioners than is perhaps often surmised, and for the following reasons:

All nasal polypi possess hygromic or hygroscopic characteristics, by which they absorb moisture in damp atmospheres, and give it off again in dry weather. Swollen by respiratory gases saturated with moisture, if possible, they more tightly cork or occlude the chief chamber of the nasal apparatus, and the openings of cavities adjacent thereto. In this way an existing discomfort is increased.

The presence of polypi, by the irritation produced, induces greater or less secretion of mucus, according to circumstances.

By closing the nasal passages, they prevent mucus from passing back to the pharynx, as nature intended it should, giving a backward dip to the floor of the nasal fossæ, and a downward and backward inclination to the turbinated bones.

Air, in its passage to the lungs, instead of being warmed by the radiating vascular turbinated plates, owing to obstruction afforded by polypi, is forced to seek ingress by the mouth. By this means the lungs receive respiratory gases at a lower temperature than is proper, and such as, moreover,

are improperly filtered, which is never the case where the nasal passages remain unobstructed. Here we see the reason why, with certain diseases of the nasal passages and upper pharynx, pulmonary involvement so frequently appears as a sequel.

The connection between nasal polypi and asthma is oftentimes very intimate, as has been ably demonstrated by Voltolimi and Joal; indeed, the latter is not infrequently wholly dependent upon the former. And here permit a suggestion in passing: Note how frequently, at times, an asthmatic attack disappears when relief is obtained from coryza; or how a case of bronchitis is relieved by removing some cause which has the effect of obstructing the nasal passages. Mark, too, how readily a paroxysm of "hay-asthma" yields when the puffiness and irritability of the erectile tissues of the posterior portion of the nose are remedied—quieted, for instance, by a spray of volatile oil of eucalyptus or solution of erythroxyo-caffeine, permitting the air once more to find its way by the natural passage to the lungs. When the mechanical obstruction is removed, the wheezing and inharmonious rasping of the bronchi quickly cease; and in many—perhaps the majority of the cases—the asthmatic groanings and creakings are cries for nasal relief. The asthma itself may be produced as the sequel of mechanical obstruction, or merely an irritation derived from reflex cause.

Polypi may, and often do, so obstruct the lachrymal duct by pressure, as to cause flooding of the eyes, and this may be the first indication of their existence. Again, headache is induced, the severity of which depends upon like or similar causes, and is manifested by drooping lids and dull and suffused eyes; here there is a closing of the infundibulum or *ostium frontale*, preventing proper ventilation of the frontal sinuses. The frontal headache attendant upon so-called "cold in the head" is of this class, regardless of the presence of actual polypi, and may often be relieved by the use of Politzer's air-bag, employed in the same manner as in inflation of the middle ear through the posterior pharynx and Eustachian tube; the ventilation of the frontal sinus relieves congestion which has resulted upon temporary closure of the openings. Persistent cough, too, is frequently a condition or symptom, relieved by the removal of polypi which, alone or by their secretions, cause tickling of the posterior pharynx, and induce thickening of the palatine tissues. Sneezing is oftentimes another indication of the presence of such growths, bearing in mind, however, the application of the old saw: "All rabbits are hares, but all hares are by no means rabbits."

It is even possible for polypi to cause marked disfigurement of the nose and face, though happily this is rare. This is true of the German boy before noted as being my first patient of this class. He is now grown to man's estate, and would never permit any attempts looking to permanent removal of his troubles. However, his physiognomy was such that polypi were unable to work any material change for the worse. Subsequently, a second case came under observation, under the care of Dr. Poussette, of Sarnia, in which the bridge of the nose was greatly broadened, and to such a degree as to present the typical so-called "frog-face"; in this case, the trouble began thirty-five years before, or when the patient was about the age of nineteen or twenty. Marked deformity, however, is of infrequent occurrence, except when the trouble is of long standing and induced before the full growth and development of the individual were attained. Morell Mackenzie declares that facial disfigurement "is so rare that it may be dismissed from consideration"; and some authors have been at pains to deny its occurrence altogether. I must confess, moreover, to have been among the sceptics until convinced to the

contrary by ocular evidence. Evidently, like all rules, those referring to polypi are capable of exceptions.

Epileptic convulsions I find cited as one of the evidences and results of polypoid growths; but such are necessarily of greater rarity than face-distortion and are of reflex origin, hence deserving of merely passing mention.

The primary cause of polypi is among the many things open to conjecture. Morell Mackenzie openly admitted his ignorance, and Bosworth is equally frank. Two writers suggest their production to be the sequel of long-continued swelling and infiltration of the mucous membrane from which they spring. Be this as it may, the causes undoubtedly are many and varied; they may be dependent upon either general or local mal-nutrition or reflexes. Further, careful examination of the surroundings and locality of the *habitat* of such growths, while it may not reveal absolute causes, certainly affords some clue to effects.

Note that the middle and superior turbinated bones are portions of the ethmoid. The ethmoid cells, moreover, are developed about the fourth or fifth year of childhood. In the formation of these cells, the spaces in the upper portions of the nasal cavities are probably encroached upon, and the process of narrowing the recesses by the bending and twisting of the cartilaginous and bony plates is evidently now inaugurated. That this encroachment increases with physical development and growth is not to be gainsaid; hence, that it is a factor in polypi-production would seem evident from the fact that growths do appear as early as the eleventh year. Two surfaces touching one another may induce irritation and secure an increased flow of mucus. The surfaces thus approximated readily retain portions of the excreted material, the flow of which is stimulated. Accumulated mucus always becomes more or less inspissated; and such a tenacious clinging mass, dragging upon the mucous lining where it is vascular and plentifully provided with connective tissue, evidently may, and does at times, cause a yielding which results in the development of polypi. From the statistics already given, based upon examination of cadavers, the actual attachments in thirty-six out of forty-two cases were at points over which the mucus from the cavities adjacent to the nasal fossæ must flow.

Among the causes necessary to the production of polypoid growths, then, we appear to have: Narrowing and contraction of certain portions of the nasal cavities; Irritation of mucous membrane; Mucus more or less inspissated, and therefore tenacious; A vascular surface well supplied with connective tissue, and capable of being dragged upon by tenaciously-adherent mucus acting as a mechanical force.

When there is no irritation in the nasal passages, no crowding of one part by another, and when all the cavities and the meatus are readily reached by the to-and-fro currents of air, excessive moisture and excessive mucous accumulation, and the apparently essential conditions to polypus-production, do not exist. In the young (prior to the tenth or eleventh year), excessive secretion and other abnormal conditions favorable to such growths may have place, but it is probable there is greater tonicity and firmness of mucous tissue, not easily overcome by accumulated and dragging secretion; and certainly the amount of connective tissue is less.

The symptoms of nasal polypi demand no especial mention, since they have already received general attention in speaking of effects; and definite diagnosis, of course, must be had as the sequel of ocular inspection of the nares. Examination through the anterior nares, made by means of the forehead mirror and speculum, or, better yet, a pair of curved dressing-forceps in

FOR LARGE ACNE POSTULES—

Ichthyol	1 part.
Bismuth subnitrate	1 part.
White precipitate	1 part.
Vaseline	10 parts.

Apply at night.—*Von Hebra and Ullman.*

FOR VAGINISMUS—

℞ Strontii bromid.,
Potass. bromid.,
Ammon. bromid.. āā ℥i¼.
Aq. destill..... ℥viij.

M. Sig.: Tablespoonful twice a day,

Or,

℞ Zinci. valerianat..... gr. ⅝.
Quinin, valerianat... gr. jss.
Extr. opii,
Extr. belladonn... āā gr. ⅛.

M. ft. pil. No. j. Sig.: From three to six pills daily.

Locally,

℞ Ext. krameriæ..... gr. iss.
Morphin. hydrochlor.. gr. ¼.
Ol. theobrom ..... ℥j.

Ft. suppos. vaginal.

Or,

℞ Cocain. hydrochlor... gr. iij.
Ext. belladonn..... gr. ijs.
Strontii bromid..... gr. iv.
Ol. theobrom ..... ℥ij.

M. ft. suppositor. vaginal.

—*Touvenaint, in New Yorker Med Monatsschrift.*

FOR CHAPPED HANDS AND FACE AND SORE NIPPLES.

℞ Compound tincture of benzoin ..... 10 mm.
Alcohol ..... ℥ij.
Aquæ rosæ ..... 30 mm.
Glycerine ..... ℥j.

M. Apply to chapped surfaces at night, after washing with soap and water and carefully drying.

cases with excellent results; subsequently it proved a complete failure so far as removal was concerned, though generally it procured more or less temporary relief; it is palliative rather than curative.

Caustics at the present day meet with favor, especially glacial acetic, carbolic and nitric acids, and tincture of iodine. The glacial acetic acid is especially satisfactory, save for the pain induced and the difficulty of confining it to the growth alone. The others are open to like objections, and the additional one of unpleasant fetor arising from the slow death induced. Of late years chromic acid has proved most satisfactory in my hands, as it is totally devoid of the unpleasant features accruing to other caustics and escharotics, since its properties are limited to the growth to be removed. It is a solvent of animal tissue, but rapidly loses one-half its oxygen, whereby it becomes a harmless sesquioxide, so that especial care is required only at the instant of application. Even should it touch sound tissue, a bit of cotton wound on a probe and dipped in a four per cent. solution of cocaine obviates all unpleasant consequences. Again, chromic acid is antiseptic and disinfectant; is ten times stronger than carbolic acid; fifteen times stronger than nitric; twenty times stronger than mercury bichloride; and last, but by no means least, the pain resultant from its application is merely nominal.

A saturated solution of chromic acid made fresh with water (*beware of touching with alcohol lest an explosion occur*), or the crystals merely moistened, may be applied by means of a fine glass rod or glass brush, or a bit of cotton wound about a slender gutta-percha probe. No especial skill is required. Reflected light obtained by the forehead-mirror should be employed, however, to illuminate the interior of the nose, and the view enlarged, if necessary, by the introduction of the tips of a pair of curved dressing-forceps. The growth absorbs the acid quickly, which insures its death, and the polypus comes away spontaneously in a few hours, or, at most, a few days, a second application being rarely required. Donaldson, who also employs chromic acid, remarks that his invariable custom is to bathe and wash out the passages with lead-water before applying the escharotic. This I have never done, and apparently no special advantage is to be derived therefrom. As there are usually several polypi, as soon as one is removed, those behind should be attacked in the same way. Some few patients who had been treated by evulsion have spoken with great complacency of the use of chromic acid, as being pleasanter and nearly devoid of any suffering. Since it is so nearly painless, invariably effective, and does not upset or frighten either timid or nervous, and is always within the reach of the general practitioner without special aids or appliances, it cannot but commend itself.

Lactic acid has considerable to recommend it also, if the claim that it is harmless to sound tissue but fatal to adentitious growths is tenable; but I have never had occasion to employ it, being loath to cast aside a satisfactory for a new and untried remedy.

RATIONAL TREATMENT OF POST-PARTUM HÆMORRHAGE.

By JOHN R. HAMILTON, M.D., M.C.P.S., Port Dover, Ont.

Any paper having for its title such a commonplace name as the above will, I have no doubt, cause the majority of readers to remark that we can have very little to add to what has been given us down to the present juncture in medical literature in reference to an accident so very appalling in its nature as to bring terror to the accoucheur as well as too often woe to the household, an accident which happened far too frequently in former years; and

although happily not so frequent in latter days, it nevertheless causes the honest practitioner to be ever on the alert, and to be prepared with the latest treatment and the wisest methods of averting the disaster, and the promptest methods of relief when it perchance overtakes him. The numerous and varied modes of treatment which have been advised are, I often think, a tacit confession of faithlessness in any one of them separately, as they are generally advised to be resorted to in turns, and when all have proved futile, as they often do, and the blanched and restless patient finally gasps for the last time, the accoucheur will find forlorn consolation in the fact that he has tried them all in vain.

During the last few years we have seen a lively discussion in reference to this highly important question on the continent of Europe, notably at a meeting of the Obstetrical Society of Berlin in 1894, when a sharp discussion arose in reference to the causes of this hæmorrhage. Trauma and atony both had their champions, the differential diagnosis between them resting in the fact, viz., whether the bleeding occurred *after* or *before* the separation and expulsion of the placenta. One celebrated man maintained that the danger from atony was not to be compared with that of manual separation, and that although atony might be the cause of placental retention, that repeated frictions, externally aided as a matter of course by ergot, would soon produce tonicity enough to expel the placenta in a more natural and complete method. This view met with spirited opposition, and the consensus of opinion was largely in favor of early and complete removal, let the results of the trauma be what they would. Such a discussion will no doubt bear good results in calling attention to the too reckless manner sometimes indulged in when carrying out the third stage of labor (I have known the placenta to be left in the uterus until the patient was bled to syncope, in the hope of tonicity returning to expel it, and I have also seen violent hæmorrhage caused by the tearing-off process), but like all scientific gatherings of a similar nature, the treatment was scarcely touched upon, at least no new treatment appears to have been spoken of at Berlin. The great authors in midwifery on both continents have a list of remedies almost identical, ergot, injection of hot water, injection of cold water, or both alternately, injection of perchloride of iron, irritation of the womb externally and internally, strychniæ hypodermically, pouring cold water on the abdomen, ice in the uterus, plugging the uterus (which can expand to four times its present calibre), the use of the "Esmarch" bandage to retain all the blood possible in the corpus, the electric battery (generally not at hand), lowering of the head below the horizontal line—all to be tried and tested in turn, or if one remedy fails, we are advised to try another. When however, we have come to the very worst and are brought face to face with this accident in midwifery, let the ætiology be either atony or trauma, what is the first surgical procedure we should think of? Undoubtedly compression of the abdominal aorta. In a crisis such as this, the results of which are to be either life or death in a few minutes, the operator has absolutely no room for any experimental work, provided he can use one scientific surgical measure, and make all the others adjuncts, a measure which I think will bear the light of investigation, and he can show from anatomical data that he used rational means to an end. Surely in the halo which surrounds gynæcological surgery at the present day, treatment of a more positive nature is required for this hæmorrhage, the source of which is so well known, the open mouths of a thousand minute vessels, suddenly deprived of their connection with the placental circulation—vessels which derive their supply from two arteries, the uterine and ovarian, the great portion of which is from the former. This vessel, as we all know, is a branch of the internal iliac (or "hypogastric" as

it was named in Dublin thirty years ago), a branch of the common iliac, a direct continuation of the abdominal aorta. The source of the ovarian is also from the lower part of the aorta, and although we have some authors who speak of the anastomoses of the pelvic region flippantly, when we come to facts, we have really no other source of supply for this hæmorrhage than these two pairs of arteries; and having, as I said before, no room for false doctrines, we have no theoretical guess-work when we apply with that firmness which the case demands, the knuckles or ulnar surface of our left hand, compressing the vessel (which is easily felt in the present condition of the patient, with her powerless and unresisting abdominal muscles) firmly on the lumbar spine which is also here quite prominent, the vena cava inferior being of course avoided. Where it runs along the right side of the vertebra on the psoas muscle, the only structure you can injure by this pressure when continued too long, might be the lumbar or solar plexus of the sympathetic. This you can obviate by moving your point of pressure up or down at intervals, and I have seen no untoward results in this respect in my own cases. When you have your left hand thus engaged, you can use your right to irritate the womb, assist the nurse with her hot or cold water plug, or use any of your other adjuvants. In a short time the pulsations of the aorta will be felt to have become stronger, owing to our conserving the fluid, and you can now afford to wait a short time and allow the womb to regain its contractile power, especially that tonicity which is required in the circular muscular fibrillæ of the numerous open-mouthed vessels in order to ligature them. You must remember the fact that the uterus has just done a hard twenty hours' work in expelling its contents, and a little time is required to get contraction, let your artificial resources be what they may. But now, having your tourniquet on your vessel, you can afford as much time as a surgeon at an amputation can, to secure the vessels before he frees the circulation to the stump, and just as the careful surgeon allows the circulation to strike the new ligatures and thrombi gradually by releasing the pad on the great artery gradually, the careful accoucheur will do likewise and watch with vigilance the results. The ligatures here, the contracting muscular fibres, require the aid of coagulation as in other parts of the body, to ensure their safety, and at this juncture your assistant can inject some ergotine with advantage.

Dr. Stanhope Bishop, of Ancoats Hospital, Manchester, in an admirable paper said: "Compare the obvious duty in this case with the parallel obvious duty in ordinary surgery. A man's leg is rapidly cut off by a circular saw. From a multitude of small and large arteries spurts the arterial blood; in a few moments, unless prevented, the amount of available blood in the body will sink below that necessary to keep going the most important nerve centres. What is to be done? Should the surgeon set to work methodically to tie all these vessels from the saw surface? Should he douche the wound with hot or ice-cold water, or should he pour styptics over its spouting surface? No surgeon would hesitate for a moment to compress the main vessels at once and then tie them in detail, and not until all were secured would he relax the pressure. Suppose after all the patient died. Would there have been an atom of doubt in his mind as to whether he had done the right thing, whether he had not better have applied ice or hot water or liquor styptics, or Monsel's solution, or have syringed the raw surface, or used the battery? He would laugh at the idea, because here the procedure has been settled once for all on scientific grounds, and he knows for certain the one thing he must do first. The success of all else depends on this primary duty. Why should there be any doubt in this strictly analogous case of a bleeding surface simply because it is situated in the uterus and not outside?" How strange it is that writers

on obstetrics nearly one and all give this mode of treatment, if mentioned at all, as the last on their list. Playfair, Churchill and Barnes, if I remember correctly, say that it may be resorted to as "a temporary expedient," and other writers on our own continent refer to the expedient generally in a perfunctory manner as one that may be tried, etc. Nevertheless, I have no doubt that many practitioners have adopted this treatment years ago, as I did myself a quarter of a century ago, during which time my cases of post-partum hæmorrhage have been, I suppose, the ordinary average percentage of other practitioners, in cases in all now aggregating hundreds, and I have never yet had cause to change my opinion as to its merits. I was more particularly impressed with its value in a case I attended during the past year. The patient was the subject of mitral disease, and from the general cachexia and relaxation of tissue, I expected post-partum bleeding, and in this I was not disappointed. The well-known gush followed the extraction of the placenta almost immediately, and as the abdominal aorta was easily felt, I soon had it under control, but had a great deal of difficulty in getting the uterus to contract at all, but finally succeeded by external manipulation with the right hand, while I had the nurse inject cold and hot water alternately. I feel satisfied that had any injections been thrown against this torrent when at its best, it would have been as futile as an inch-hose from a fire-engine directed on one of our mammoth city buildings when in flames, and what utter folly it would be to inject a thin stream of perchloride of iron or anything else against a gushing stream brushing your well-intended medication off as quickly as it comes. Better a thousand times to try and induce coagulation in the uterus by grasping it with your two hands than to trust in your syringe, but better still, to stop your gush of hæmorrhage by allowing only the minimum quantity of blood to get to the bleeding surface, by any means in your power, and compressing the aorta is the rational surgical method to accomplish this. I hope we will shortly see it advised by the authors who write for our guidance, and that of the young men who will follow us, that this be recommended, not as a *dernier resort*, but as a prime factor in treatment when he hears the first rustle of post-partum hæmorrhage, a rustle too well known and too awfully significant to require description from me.

CHLOROFORM ANÆSTHESIA.*

By DR. DUNCAN,
President of Chatham Medical Society.

GENTLEMEN,—In speaking on chloroform anæsthesia to-night, it is not my object to give an exhaustive discussion of this wide subject, filling in all the details of fact and truth bearing upon it, but to lay down the theory of its action in a manner clear, concise and practically workable, that we may see at a glance its uses, modes of administration, its dangers and antidotal treatment. Two briefly stated propositions will for my present purposes cover the main ground.

Chloroform anæsthesia, under proper limitations, is the rendering by chloroform of the higher nerve centres of the brain and cord unconscious of the needs, the dangers and the sufferings of those portions of the animal body of which they are the special guardians; while chloroform poisoning means the carrying of its influence far enough to render the lower vital

* Read before meeting of Chatham Medical Society, March 11th, 1897.

centres, situated in the medulla and closely connected with the sympathetic system of nerves, unconscious of the necessities and dangers of those parts and functions over which they are placed on guard; or, more briefly, anæsthesia puts to sleep the cerebro-spinal centres controlling sensation and volition. Poisoning by chloroform similarly puts to sleep the lower vital centres controlling the foundational vital processes, respiration and circulation, etc.

Just here I would like very strongly to emphasize the expressions "puts to sleep" and "renders unconscious." To illustrate the extreme case—that of poisoning—a boy about five years of age was brought to me suffering from paraphimosis. The parts were much swollen and tender, in a state quite unmanageable without an anæsthetic. The boy had a cold with a slight fever and distinct dry whistling rales all over the chest. I hesitated to administer chloroform, but as the operation was to be so brief I decided to place him under its influence. The patient went under nicely, the operation was done in a few seconds, and the anæsthetic discontinued. I remained a few minutes till signs of returning consciousness began to show, when I stepped into the next room, leaving Dr. Rolls in charge. Almost immediately he called me back, saying that the child had stopped breathing. We at once commenced artificial respiration, which Dr. Rolls splendidly maintained, while I prepared an injection of strychnine. Consciousness for respiration almost immediately followed its administration, and we also soon breathed freely.

Some two years later I was clearing out the axilla in a feeble woman of about sixty. After the breast had been removed she suddenly became blue and pulseless with catchy breathing. The hypodermic administration of strychnine (which I now always have ready in the syringe) almost immediately aroused the sleeping cardiac centers, and brought the wrist pulse back so that the operation was finished without further mishap.

While administering chloroform to a strong, full-chested young man, who, however, was slightly nervous, with very rapid pulse before administration began, I found it almost impossible to keep the patient anæsthetized. Near the close of operation the surgeon asked to have the chloroform pushed, as the young man was restless and moving. This I did, but hardly as far as to quiet the conjunctival reflexes, and this condition I managed with difficulty to maintain for a few minutes until cutting was done. I then stopped the chloroform and simply watched the patient's condition. Some minutes elapsed; no change in pulse or color occurred, nor any dilatation of the pupils, but the patient suddenly stopped breathing. Artificial respiration was at once adopted and maintained. All possible air was given, strychnine injected, and ammonia inhalation given. After a few minutes' work consciousness returned, so that the patient would breathe when told to do so. But unless told, or forced by artificial respiration movements, the patient did not breathe. This state of forced, or purely volitional respiration lasted five or ten minutes, and gradually verged to the natural state.

Dr. McKeough and Dr. Charteris have each told me of a case in both of which arrest of respiration took place several minutes after the anæsthesia had been discontinued.

Now, all the instances save one, were examples of poisonous action occurring some time after the administration was stopped, and after the process of elimination had fairly commenced, and in some cases even after signs of returning consciousness showed that the higher centres were on their way to recovery. From these cases, and I think particularly from this latter fact, some very important conclusions may be drawn:

1. That we have two distinct nervous mechanisms or systems to deal with

in chloroform administration, and that these are quite unlike in their methods of response to the drug.

2. That the higher centres yield readily to chloroform, absorbing it quickly; but also yielding it back with comparative readiness to the eliminating blood stream, whereas the lower or vital centres strongly resist the power of chloroform; but once having succumbed, give it up slowly, nay, even continue to absorb after general elimination has well begun. If these two systems responded equally readily to chloroform, then its use as an anæsthetic would be obviously impossible.

3. The proportion of chloroform in the blood necessary to anæsthetize the higher centres is much smaller than that required to produce anæsthesia of the sympathetic system; but when both have been brought under control the conditions are reversed, a smaller proportion holding, and even increasing, the effect on the lower centres than is necessary to control the higher.

The practical lessons to be adduced from these cases, and the conclusions drawn from them are, I take it:

1. As always advised in commencing, increase the dosage gradually, lest we should unexpectedly reach the lethal dose before we had tested the resisting power of the lower centres.

2. Definite and controllable dosage must be attained and maintained throughout by the use of a suitable inhaler.

3. Carefully avoid a sudden increase of the amount of chloroform given later in the process, when the blood has become accustomed to carry more nearly the amount of saturation necessary to anæsthetize the lower centres. A small sudden increase may then readily become the "last straw."

Then as regards the treatment of poisoning:

1. Remember that chloroform produces no permanent paralysis, only anæsthesia, and if elimination and excitation can be obtained, the temporary condition will soon be overcome.

2. Surround your patient with abundance of fresh air at once.

3. Use artificial respiration early, assiduously and persistently.

4. Produce excitation by forcibly drawing forward the tongue and promptly injecting a large dose of strychnine to restore the lost excitability of the sympathetic centres.

One more point I would wish to press upon the attention of the Society before closing.

It is a well-known fact to those accustomed to administer chloroform, that fatal accidents are much more likely to occur in cases where the patient has been oppressed with fear, either of the operation to be performed, or of the anæsthesia itself; or in the case of patients who have been weighed down by prolonged care, anxiety, sorrow, or other deep emotion, than where courage is high and spirits bright.

Dr. R. M. Bucke, of London, has ably and ingeniously argued that the sympathetic system of nerves and nervous apparatus is the centre and machinery of emotional life. If this be a correct view—and few of us doubt it—then the above mentioned fact is readily explainable. Deep or prolonged emotion naturally depresses its own nervous apparatus, and reduces its power to resist deleterious influences; the closely associated centres of organic life share this depression and loss of resisting power. The higher and lower centres are thus brought to, or nearly to, a level, so that surgical anæsthesia and chloroform poisoning take place practically at one and the same time.

British Medical Association Column.

MONTREAL MEETING, 1897.

We publish with very great pleasure the list given below of the officers appointed by the Home authorities for the forthcoming meeting of the British Medical Association, in Montreal. It would, we think, be difficult to have a more distinguished list of office-bearers, especially when it is taken into account how many of the leaders of the profession in the Old Country have already filled the most important posts at previous meetings, and, as a consequence of the wise system of rotation adopted by the Council of the Association, were not eligible to serve here. That so many who had not previously accepted office have consented to preside here in Canada, is a matter for genuine self-congratulation.

Of those appointed to deliver addresses we need say little. Dr. Osler is one of ourselves, even if a great American University has for a time secured him for its staff; and, as a Canadian, is a most happy choice, inasmuch as he belongs to Toronto, as well as to Montreal. Mr. Mitchell Banks is the most popular surgeon in the north of England, a speaker of great power, and is already no stranger in Canada.

Of presidents of sections, we heartily congratulate the Association as well as ourselves that we have secured two such Canadians as Dr. E. P. Lachapelle and Dr. R. M. Bucke. Most of the names of the remaining presidents are familiar to all of us: Stephen Mackenzie, Christopher Heath, Watson Cheyne, Edward Nettleship and Malcolm Morris. These names must immediately gain the approval and self-congratulation of every Canadian. Drs. Sinclair, Waller, Leech and Greville Macdonald may not be so generally known, though each is recognized as a leader by those interested in his special line of work. W. J. Sinclair, Professor of Gynæcology at Owens College, Manchester, is a brilliant and thoughtful writer on matters gynæcological. Dr. Leech, another of the professors at Owens College, is the Senior Physician to the Manchester Royal Infirmary, the founder of one of the very few active schools of pharmacology in Great Britain, and an authority upon that subject. Dr. A. Waller, the brilliant son of a celebrated physiologist, is, perhaps, the brightest and most original of metropolitan physiologists. Dr. Greville Macdonald, another brilliant son of a celebrated man (his father is George Macdonald, the novelist), is one of the most popular and highly esteemed of English laryngologists.

Referring to the list of vice-presidents in the various subjects, it will be seen that a most conscientious attempt has been made by the parent Association at the suggestion of the local Executive Committee, to embrace the whole of the Dominion. When Montreal, of its own free will gave up the opportunity of appointing its leading practitioners as presidents of the various sections, it is but becoming that leaders in the profession in Montreal should be appointed to vice-presidential posts, and no one can object if this list contains a considerable portion of well-known Montreal names, for it will be seen that Toronto, Quebec, London, Winnipeg, Hamilton, Halifax, St. John, N.B., Victoria, and all the leading centres are given recognition, and are duly honored so far as it is in the power of the authorities. Naturally there has been a difficulty in appropriately including all the leaders in the sections of medicine, surgery and gynæcology; it has, in fact, been impossible to include all who we would have desired to see nominated as vice-presidents, but it must be confessed that as far as they go the lists in these subjects are excellent.

Thus, in short, by these lists a successful meeting is ensured, both from an Imperial and a national point of view.

PRELIMINARY PROGRAMME.

President—Henry Barnes, M.D., M.R.C.S., F.R.S.E., J.P., Physician Cumberland Infirmary, Carlisle.

President-elect—T. G. Roddick, M.D., M.P., Professor of Surgery in McGill University, Montreal.

President of the Council—Robert Saunby, M.D., F.R.C.P., 83A Edmund Street, Birmingham.

Treasurer—Charles Parsons, M.D., Dover.

Addresses will be delivered as follows:

Medicine—Dr. W. Osler, F.R.C.P., Professor of Medicine in the Johns Hopkins Univ., Baltimore, U.S.A.

Surgery—Mr. William Mitchell Banks, F.R.C.S., Surgeon to the Liverpool Royal Infirmary.

Public Medicine—

The scientific business of the meeting will be conducted in eleven sections, as follows, namely:

Medicine—President: Dr. Stephen Mackenzie, London. Vice-Presidents: Dr. J. E. Graham, Toronto; Dr. W. Bayard, St. John, N.B.; Dr. J. P. Rottot, Montreal; Dr. F. W. Campbell, Montreal; Dr. J. Stewart, Montreal; Dr. H. P. Wright, Ottawa. Secretaries: Dr. H. A. Lafleur, Montreal; Dr. W. F. Hamilton, Montreal; Dr. Wm. Pasteur, 4 Chandos Street, Cavendish Sq., London, W.

Surgery—President: Mr. Christopher Heath, London. Vice-Presidents: Sir Wm. Hingston, Montreal; Hon. Dr. Sullivan, Kingston, Ont.; Hon. Dr. Farrell, Halifax, N.S.; Dr. I. H. Cameron, Toronto; Dr. F. LeM. Grasett, Toronto; Dr. James Bell, Montreal; Dr. G. E. Armstrong, Montreal. Secretaries: Dr. R. C. Kirkpatrick, Montreal; Dr. Thomas Walker, St. John, N.B.; Mr. Jordan Lloyd, F.R.C.S., Richmond Hill, Birmingham.

Obstetrics and Gynæcology—President: Prof. W. J. Sinclair, Manchester. Vice-Presidents: Dr. William Gardner, Montreal; Dr. Jas. Perrigo, Montreal; Dr. J. A. Temple, Toronto; Dr. J. C. Cameron, Montreal; Dr. T. J. Alloway, Montreal; Dr. James Ross, Toronto. Hon. Secretaries: Dr. D. J. Evans, Montreal; Dr. W. Burnett, Montreal; Dr. A. E. Giles, 58 Harley Street, Cavendish Sq., London, W.

Public or State Medicine—President: Dr. E. P. Lachapelle, Montreal. Vice-Presidents: Dr. R. Craik, Montreal; Dr. Montizambert, Quebec; Dr. P. H. Bryce, Toronto; Dr. Sir James Grant, Ottawa; Dr. R. H. Powell, Ottawa. Secretaries: Dr. Wyatt Johnston, Montreal; Dr. E. Pelletier, Montreal; Dr. Henry Littlejohn, Town Hall, Sheffield.

Psychology—President: Dr. R. M. Bucke, London, Ont. Vice-Presidents: Dr. D. Clark, Toronto; Dr T. J. Burgess, Verdun, Que.; Dr. A. Vallee, Quebec; Dr. G. Wilkins, Montreal. Hon. Secretaries: Dr. J. V. Anglin, Montreal; Dr. George Villeneuve, Montreal; Dr. J. G. Blandford, London County Asylum, Banstead, Surrey.

Anatomy and Physiology—President: Dr. Augustus Waller, F.R.S., London. Vice-Presidents: Dr. F. Shepherd, Montreal; Dr. A B. Macallum, Toronto; Dr. T. Wesley Mills, Montreal; Dr. A. Primrose, Toronto; Dr. J. B. A. Lamarche, Montreal; Dr. D. B. Fraser, Stratford, Ont. Hon. Secretaries: Dr. J. M. Elder, Montreal; Dr. W. S. Morrow, Montreal; Dr. Robert Hutchison, London.

Pathology and Bacteriology—President: Mr. Watson Cheyne, F.R.S., London. Vice-Presidents: Dr. J. G. Adami, Montreal; Dr. J. Caven, Toronto; Dr. J. Stewart, Halifax; Dr. J. C. Davie, Victoria; Dr. L. C. Prevost, Ottawa; Dr. M. T. Brennan, Montreal. Hon. Secretaries: Dr. W. T. Connell, Kingston; Dr. C. F. Martin, Montreal; Dr. Rubert Boyce University College, Liverpool.

Ophthalmology — President: Mr Edward Nettleship, F.R.S.C., London. Vice-Presidents: Dr. F. Buller, Mont-

real; Dr. R. A. Reeve, Toronto; Dr. Ed. Desjardins, Montreal; Dr. A. A. Foucher, Montreal. Secretaries: Dr. W. H. Smith, Winnipeg; Dr. Jehin Prume, Montreal; Dr. T. H. Bickerton, Liverpool.

Pharmacology and Therapeutics—President: Dr. D. J. Leech, Manchester. Vice-Presidents: Dr. A. D. Blackader, Montreal; Dr. Jas. Thorburn, Toronto; Dr. C. R. Church, Ottawa; Dr. J. B. McConnell, Montreal; Dr. F. J. Austin, Sherbrooke; Dr. Walter George Smith, Dublin. Secretaries: Dr. F. X. L. DeMartigny, Montreal; Dr. J. R. Spier, Montreal; Dr. C. R. Marshall, Downing College, Cambridge.

Laryngology and Otology—President: Dr. Greville Macdonald, London. Vice-Presidents: Dr. W. Tobin, Halifax; Dr. G. S. Ryerson, Toronto; Dr. H. S. Birkett, Montreal; Dr. G. R. McDonagh, Toronto. Secretaries: Dr. Chretien, Montreal; Dr. H. D. Hamilton, Montreal; Dr. W. Permewan, 7 Rodney Street, Liverpool.

Dermatology—President: Mr. Malcolm Morris, London. Vice-Presidents: Dr. J. E. Graham, Toronto; Dr. F. J. Shepherd, Montreal; Dr. J. A. S. Brunelle, Montreal; Dr. J. L. Milne, Victoria. Secretaries: Dr. Gordon Campbell, Montreal; Dr. J. M. Jack, Montreal; Dr. James Galloway, 21 Queen Anne Street, Cavendish Square, London, W.

Reports of Societies.

THE HURON MEDICAL ASSOCIATION.

Regular meeting was held in Seaforth, February 3rd, 1897. There was a good attendance and a great deal of interest taken in papers and discussion. After the regular routine business, reading of minutes of last meeting, hearing correspondence, etc., was gone through, Dr. Graham, of Brussels, read a paper on Raynaud's disease, with presentation of case. The doctor went very carefully over the subject, taking up the symptoms under three heads—first, local syncope; second, local asphyxia; third, local gangrene. A very able discussion followed, in which Drs. McKenzie, McKay and Turnbull took the leading part.

Following this, Dr. McKenzie, of Moncton, read an able paper on "Hernia." He also presented a case with fibroid of uterus, which was examined by the members present. No urgent symptoms having arisen, it was decided that the best course would be to delay any operative proceedings, but keep the patient under careful supervision.

On account of the early removal of Dr. Graham from the county, a resolution was drafted and presented to him, expressing the Association's high appreciation of his valued services, and also their deep regret at parting with so valued and active a member.

The officers for 1897 were elected by acclamation: Dr. McKay, of Seaforth, President, and Dr. McGinnis, Secretary.

MEETING OF THE CHATHAM MEDICAL AND SURGICAL SOCIETY.

The regular monthly meeting of the Chatham Medical and Surgical Society was held in the rooms of the United States Consul, on the evening of March 11th, 1897, at 8.20. There were present: Drs. Duncan (President), Rutherford, J. L. Bray, Charteris, Backus, Fleming, Musson, Hall, Holmes, Tye, Douglas and R. V. Bray (Secretary).

The minutes of the last regular meeting were read and approved.

Moved by Dr. J. L. Bray, seconded by Dr. Rutherford, "That Dr. W. Douglas be elected a member of this Society." Carried.

Under the head of new business, Dr. J. L. Bray spoke *re* provincial tariff of fees, and asked for an expression of opinion from the members present. After some questions had been asked and answered, Dr. Rutherford moved, seconded by Dr. Fleming, "That this society pass a resolution approving of the course of the Medical Council in their endeavor to secure a provincial tariff of fees, and that the Secretary be instructed to notify Dr. Pyne of our action in the matter." Carried.

Dr. Duncan read a paper on "Chloroform Anæsthesia," its uses, modes of administration, its dangers, and antidotal treatment. (See page 314.) The paper was brief but complete, and elicited a good discussion.

Dr. Fleming will read a paper at the next regular meeting in April.

Meeting adjourned.

SURGEON-GENERAL ROBERT ADAIR.—The hero of that fine ballad, "Robin Adair," was a dashing young Irish surgeon who, about the middle of the last century, finding his way into London society, was fortunate enough to secure the affections of Lady Caroline Keppel, daughter of William, second Earl of Albemarle, and his wife, Lady Anne Lennox, daughter of Charles, first Duke of Richmond. The match was naturally looked on with disfavor by the family of the young lady, and it was during a period of temporary separation that Lady Caroline is said to have written the words of "Robin Adair," and set them to the old Irish tune of "Eileen Aroon," which she had learned from her lover. At length, however, love triumphed, and the pair were united on February 22, 1758. Within a few days Adair was appointed inspector-general of militaryhospitals, and subsquently becoming a favorite of the king, was made surgeon-general, king's sergeant-surgeon and surgeon of Chelsea Hospital. He died in 1790. —*Medical News.*

Special Selections.

AN ADDRESS ON THE VALUE OF PATHOLOGICAL RESEARCH.*

By LORD LISTER, P.R.S.

It gave me very great pleasure to witness the opening of the physiological laboratories yesterday by His Excellency the Lord-Lieutenant. Such an establishment is calculated to be of enormous advantage to the North of Ireland. The benefits which it will confer will be of various kinds. In the first place it will be of very great assistance to the medical practitioner in forming his diagnosis of the disease of the patient he has to treat. In these days the knowledge of pathology has made immense advances; and, at the same time, along with these advances in pathological knowledge, there has arisen increased complexity in the methods of examining pathological objects. Section cutting, staining, microscopic examination—these are matters of the utmost moment; and yet for the general practitioner there may be neither ths apparatus nor thr time requisite for that kind of investigation. It will, therefore, be of great advantage to the practitioner, when he has removed or in any way obtained a portion of a morbid growth, to send it to a central institution, and have absolutely definite information as to the precise nature of the disease with which he has to deal. Then, as regards the bacteriological department—there, again, diagnosis will be greatly facilitated. You are most of you aware that the diagnosis of diphtheria can now be made by bacteriological examination. It is

* Delivered on January 20th, 1897, in connection with the opening of the New Physiological and Pathological Laboratories in Queen's College, Belfast, during the celebration of the Jubilee of the College.

of the utmost importance in the treatment of a case of diphtheria that its nature should be distinctly defined; that it should be known with certainty whether it is true diphtheria or a disease which closely simulates it, and may deceive the most experienced practitioner, and yet have none of the deadly characteristics of true diphtheria. Now for the future any medical man in the North of Ireland will only have to send, in a suitable tube, which will be provided by the institution, a little of the false membrane in the case with which he is dealing, and in a very short time he will have sent to him a bacteriologically-made diagnosis of whether it is a case of true diphtheria or not. Again, with reference to what is more immediately connected with the objects of this College, such an institute will be of very great help in the training of students in their education for the medical profession. In it the student will have the opportunity of practically studying the various forms of morbid growths and the diseases which are of the nature of microbes. These are days when the subjects of medical examination are becoming more and more complex, and the student is too much tempted to get up his knowledge in a superficial way, cramming to satisfy the examiner, rather than to obtain thorough-going practical information. That is more especially the case when the student is not examined by his own teachers, under whom he might work with some confidence that his labor would not be thrown away with reference to that really subordinate, but in his eyes vastly important, matter of the passing of his examination. May I venture to interpose a remark on that point, and to express the hope that the time is not very far distant when the great northern metropolis of Ireland will have its own university, a true teaching and graduating university on the same lines as most of the German universities and the Scotch? But passing from that, independently altogether of the difficulty a student may have in preparing for examination by strangers, the great complexity of the subject of medical education makes it extremely important that there should be afforded ample opportunities of practical study. The bacteriological department will be of peculiar value in the education of the student. It will in the first place convince him of the reality of the microscopic foes with which we have at the present day so largely to deal—the microbes, which are the cause of so large a proportion of human disease. He will not only read that such things are, and when he gets into practice perhaps forget that they exist, but he will know them as equitances. He will see the evidence not only of their existence, but also of their effects. The bacteriological training will besides be of special advantage in teaching the student accurate observation and also dexterity of manipulation—both most important matters in a medical man's practice. If a student is told to prepare a culture of a particular microbe in a state of purity, in order to do that he must be very sharp indeed in his observations, and very clever too, in his manipulations; and if he fails, the fact will very soon declare itself. There will be an impure culture, and instead of having only the one microbe he wished to cultivate, with its well known special characteristics, it will be seen that he has allowed others to get in at the same time. His own imperfections will thus declare themselves; but he will persevere, and go on and on until he becomes perfectly competent to produce a pure culture. This will be of great importance in his education. There is another aspect of a pathological institute which I feel some delicacy in alluding to, because there are some people who take strange views with regard to these matters—exaggerated views. There are people who do not object to eating a mutton chop—people who do not even object to

shooting a pheasant with the considerable chance that it may be only wounded, and may have to die after lingering in pain, unable to obtain its proper nutriment—and yet who consider it something monstrous to introduce under the skin of a guinea-pig a little inoculation of some microbe to ascertain its action. Those seem to me to be most inconsistent views. With regard to all matters in which we are concerned in this world, everything depends upon the motive. A murderer may cut a man's throat to kill him; any one of you medical students may have to cut a man's throat to save his life. The father who chastises his son for the sake of the good of his morals is a most humane man; a father who should beat his son for the mere sake of inflicting pain upon him would be an inhuman monster. And so it is with the necessary experiments upon lower animals. If they were made, as some people seem to assume, for the mere sport of the thing, they would be indeed to be deprecated and decried; but if they are made with the wholly noble object of not only increasing human knowledge, but also diminishing human suffering, then I hold that such investigations are deserving of all praise. Those who lightly speak on these matters little know how much self-denial is required in the prosecution of such researches when they are conducted, as indeed they always are, so far as I am aware, with the object of establishing new truth. The exercise of a little charity might lead those who speak of us as inhuman to reflect that possibly we may be as humane as themselves. The profession to which I have the great honor to belong is, I firmly believe, on the average the most humane of all professions. The medical student may be sometimes a rough diamond; but when he comes to have personal charge of patients, and to have the life and health of a fellow-creature depending upon his individual care, he becomes a changed man, and from that day forth his life becomes a constant exercise of beneficence. With that beneficence there is associated benevolence; and in that practical way our profession becomes the most benevolent of all. If our detractors knew this, common sense would enable them to see that our profession would not be unanimously in favor of these researches if they were the iniquitous things which they are sometimes represented to be. I was reading the other day a very interesting account of Pasteur's work on rabies, written by one who was associated with him from an early period (M. Duclaux). It had been established that the introduction of a portion of the brain of a mad dog under the skin of a healthy animal was liable to cause rabies, and Pasteur had reason to believe that it was principally in the nervous centres that the poison accumulated. He felt a very strong desire to introduce some of the poison into the brain of an animal; but he was a peculiarly humane man. He never could shoot an animal for sport. He was more humane than the great majority of human beings; and for a long time he could not bring himself to make the experiment of trephining an animal's skull, and introducing some of the poison of rabies into the brain. He was exceeding desirous of doing it to establish the pathology of the disease, but he shrank from it. On one occasion, when he was absent from home, one of his assistants did the experiment, and when Pasteur came back he told him that he had done so. "Oh!" said Pasteur, "the poor creature! His brain has been touched. I am afraid he will be affected with paralysis." The assistant went into a neighboring room and brought in the animal, which was a dog. It came in frisking about and investigating everything in a perfectly natural manner; and Pasteur was exceedingly pleased, and though he did not like dogs, yet he lavished his affection upon that particular animal and petted it; and from that time

forth he felt his scruples need no longer exist The truth is that the pain inflicted by this process of trephining is exceedingly slight, and yet the operation is sometimes described as being a hideously painful one. That is a mistake. In one point of fact the operation is always done now under anæsthetics, so that the animal does not feel it at all; but even without that the operation is not seriously painful. I look forward to the time when there will be an institute in connection with this College, where investigations of the kind to which I have referred can be carried on and where pathological knowledge of the first importance may be promoted. Think also of the practical advantages of an institution where the materials can be provided for the treatment of diseases on the principles which have been recently established. It appears to be now placed beyond doubt that that dreadful disease, diphtheria, may by the antitoxic treatment be reduced in mortality from about 30 per cent. to about 5 per cent. if the proper material is promptly used. It is exceedingly important that in a city like Belfast the supply of such material should be within easy reach of the practitioner—that he should not be compelled to send to London for the requisite serum, and thus lose much valuable time. Every hour that is lost in the treatment of a case of this nature is a very serious loss indeed. But it is by no means only in diphtheria that such an institute is likely to confer benefits of this kind. In the case of the streptococcus which is the cause of erysipelas and kindred disorders, including that very terrible disease, puerperal fever, there are very promising indications that the use of antitoxic serum will rescue patients from otherwise hopeless conditions. Let anyone picture to himself the case of a young wife after her first confinement afflicted with this dreadful puerperal fever, and doomed under ordinary treatment to certain death. The practitioner makes an injection of this serum under the skin, with the result that the lady rapidly recovers, and in a few days is perfectly well. Let any man conceive such a case as this, and all objections to the investigations necessary to bring about such a state of things must vanish into thin air. So soon as our poor selves are directly concerned our objections disappear. If a tiger threatened to attack a camp, who would care much about what kind of a trap was set for it, or what suffering the trap caused the animal, so long as it was caught? When the matter affects only the welfare of others, including generations yet unborn, the good done does not appeal to the individual, and the objector sees only the horrors of modern scientific investigation: of which horrors, however, he quickly loses the sense as soon as he becomes personally concerned.

On the occasion of the funeral of that illustrious investigator to whom I have above referred, I visited the Institut Pasteur, and there was shown preparations of the microbe of the plague discovered at Hong Kong in 1894 by M. Yersin. And I was told by M. Roux that M. Yersin, whom he knew intimately as formerly his colleague, had lately been treating in China several cases of that dreadful disease with serum prepared at the Institut Pasteur on the same lines as that used for diphtheria. Cultures of the plague bacillus had been taken to Paris, and at the Institut, under the most rigorous precautions, the serum had been prepared. At the Institut they did not think they had succeeded in producing a very powerful serum judging from its action on animals; but in the human subject it seems to have proved most potent. M. Yersin obtained serum sufficient for twenty-six cases of the plague. The mortality from the disease at the time was about 80 per cent. The first case which he treated was that of a young man in whom a "bubo"

characteristic of the disease was present, and the patient, already delirious, was completely despaired of. A little of the serum was introduced, and, to M. Yersin's absolute amazement, on the following day the young man was well, the bubo having almost entirely disappeared. And, moreover, in the twenty-six cases in which M. Yersin used the serum, twenty-four recovered; while in the remaining two M. Yersin felt that he was called in so late that their cases were hopeless. I would not have referred to these facts did I not know that the source from which they were obtained was absolutely trustworthy. We cannot tell how soon the plague may visit these shores. We know that in one of our great dependencies—Bombay—it is already prevalent in a very severe form, and has already cost many lives. We know that a ship may carry the disease; that rats are liable to contract it, and that a rat making its escape from a ship coming from Bombay, say, to the Thames or to Belfast Lough, may carry the plague ashore, and that the taint may be communicated to human beings, with dreadful results. I would not say that there are not slums in the city of Belfast which might harbor the plague. So you can easily recognize how vastly important it would be to have means at hand whereby, in the simple way I have described, the disease may be combated. I have, I think, said enough to show the vast importance of an institute of such a character, and I look forward to the time when you will have such an establishment, thoroughly equipped for its beneficent work.

There is another department in connection with medical education in the city about which I cannot speak in the same terms of praise as I can with reference to the new laboratories, and that is the hospital. No doubt the Royal Hospital, which I had the honor of visiting for the first time yesterday, is a fine institution; but it is altogether inadequate to the requirements of this great and rapidly-growing city. It is inadequate, whether for affording means of clinical instruction to students or for dealing with the diseases of your large and increasing population. But I am glad to know there is a prospect of better things before long. I understand it has been not merely contemplated, but determined, to build a large new hospital, provided the requisite funds can be obtained; and I have been informed that within six weeks of the initiation of the movement more than half the necessary sum has been raised. I have no doubt that the munificence of the merchant princes of Belfast will soon provide the balance. Therefore, whichever way I look at this jubilee, I feel that the College, more particularly with regard to its medical school, is entering upon a new era of prosperity. I rejoice with you in the fact, and I have felt it a great privilege to take part in your celebration.

[Since this address was delivered the last number of the *Annales de l'Institut Pasteur* has appeared, containing a paper by M. Yersin, describing his experience above referred to. The details which he gives of the cases confirm in a remarkable manner the conclusion which the mere numbers suggest. Just as in diphtheria, and exactly as must occur if the antidote is really efficacious, the cure was most rapid when the treatment could be commenced on the first day of the disease; speedy also, but less so when it was begun on the second day; and so from day to day till the fifth. Four patients were treated at this very late period, and the only failures were in two of these. More of the serum also was required in the more advanced cases. Equally striking was the manner of recovery. In none of the twelve cases in which treatment commenced within two days of the onset of the complaint did the bubo suppurate; and in those of a later period in which matter did form, the abscess closed rapidly after

being opened, instead of healing tediously as it does when recovery takes place without this treatment; and the patients, instead of having a lingering convalescence, were healthy men and women in a time which was always relatively short, and astonishingly so when the treatment had been commenced early. These details are so extraordinarily confirmatory that, small though the number of cases is, they carry conviction to my own mind. It gives me the most profound satisfaction to be able to state, on the authority of the India Office, that the Bombay Government intend to employ M. Yersin, now on his way to the stricken region, and to give a full trial to his method. I have also learned through another channel that within a fortnight of this time (February 1st) the serum treatment will probably have begun in Bombay.]

OBSERVATIONS ON THE ANTICIPATION OF POST-PARTUM HÆMORRHAGE, WITH REMARKS ON THE ACTION OF ERGOT ON PREGNANT WOMEN.

By LOMBE ATTHILL, M.D.,
Ex-Master of the Rotunda Hospital, Dublin.

A discussion on the subject of the "Anticipation of Post-partum Hæmorrhage," took place at the annual meeting of the British Medical Association, held in London, in 1873, after the reading of a paper on the subject by Dr. Ewing Whittle, and in the number of the *British Medical Journal* for November 1st, 1873, a paper of mine appeared, and in which I say: "Dr. Whittle's paper, though read just before the hour at which the section adjourned, was listened to with great interest, and a short and animated discussion followed. The reason why this paper was listened to with such attention is obvious. Every practitioner present, from personal experience, dreaded post-partum hæmorrhage, and, while admitting the value of transfusion in extreme cases, rejoiced at the prospect of not being obliged to think of so difficult and uncertain a procedure; indeed, more than one member (during the debate which had previously taken place on transfusion) asked—Could no means be suggested for rendering this operation unnecessary? Dr. Whittle's paper professed to be a reply to this query, but I think the subject should be more fully discussed." This I then proceeded to do, and my example was followed by my lamented friend, the late Dr. Alfred McClintock, in an admirable paper read before the Obstetrical Society of Dublin, which will be found in the volume of the *Proceedings* of the Dublin Obstetrical Society for the session 1873-74.

I have no intention of wearying the reader with a summary of these papers. Any one interested in the subject will find them, and a report of the discussion which followed, in the volume I have referred to; but the question then discussed was, how best to avert the anticipated danger in cases where labor was actually in progress, and though many of the suggestions were valuable, they too often fail to be efficient, because time does not exist to permit preventive treatment to take effect. Thus great stress was laid on the administration of ergot, but I have long since been convinced that, to be of real use, ergot requires not only to be administered some hours before its action as a uterine hæmostatic is needed, but also that the dose must be repeated, and that more than once, at intervals of about two hours, otherwise the effect is uncertain and so transient as to be of little value. I do not, therefore, propose to discuss this part of the subject, but to point out that in patients in whom a tendency to dangerous post-partum hæmorrhage is known to exist, or, indeed is expected to exist, the danger may in the

majority of cases be averted, or at least greatly lessened, by treatment carried out antecedent to the expected date of the occurrence of labor.

I had not been long in practice before I became convinced that the theory then universally believed, that women should not take any drug, especially tonics such as quinine, iron, and the mineral acids, during the menstrual period, was erroneous, and I took every possible opportunity of watching the effect of such medicines on women during menstruation, with the result I expected, namely, that no drug taken in its usual dose had any effect on the function in healthy women. This fact led me to administer drugs during pregnancy when necessary with equal freedom; and in the case of a lady whom I knew to have a tendency to post-partum hæmorrhage, I on one occasion administered quinine in 4 or 5-grain doses up to the advent of labor for cure of neuralgia, and on this occasion for the first time no hæmorrhage occurred with her. This struck me as remarkable, and it occurred to me that the unexpected freedom from hæmorrhage might have been due to the tonic effect of the quinine on the muscular fibres of the uterus; and, emboldened by the result of this case, I administered quinine to other patients in whose cases I feared the occurrence of hæmorrhage.

About this time the result of the action of ergot in a case of threatened abortion, to which I shall presently refer, induced me to prescribe ergot combined with strychnine for a patient in whom from previous experience I feared post-partum hæmorrhage, for some days before labor set in, and I was gratified by finding that although there was a little hæmorrhage, it was as nothing compared with what had occurred in her previous confinements. From that time it has been my invariable rule to carry out this practice in all cases in which I had reason to fear the occurrence of hæmorrhage, and the results have been most satisfactory. I never once have had occasion to regret its adoption, and never observed the most trifling injurious effects on either mother or child to follow, and this although the ergot has been taken regularly for five or six weeks prior to the occurrence of labor. The following cases are typical ones, and very instructive.

About six years ago Dr. Wright, of Dalkey, sent for me to assist him in a dangerous case of hæmorrhage. More than two hours elapsed between the sending for me and my arrival, and before I did so his exertions had been successful. The hæmorrhage had stopped and the patient's life saved, but she was still in a very precarious condition; and Dr. Wright informed me that her previous confinements had also been attended with alarming hæmorrhage.

About eighteen months subsequently the lady, now residing in Dublin, requested me to attend her in her confinement which was again approaching, and I reluctantly consented to do so, on the condition that she would submit to a regular course of treatment. She had a great objection to medicine, and was unwilling to agree to this, but on explaining to her the *rationale* of the treatment she consented, and as soon as she had entered on the thirty-fifth week of utero-gestation I put her on the following mixture: Inf. ergotæ ad ℥ vj; ext. ergotæ liq., ℥ iij; liq. strychninæ, ℥ j; a teaspoonful to be taken three times a day. The mixture she continued to take regularly for three weeks. I then discontinued it for five days, when I directed it to be recommenced.

This lady had in all her previous confinements (five in number) been taken with labor six or seven days before the expiration of the normal term of 280 days from the cessation of her last menstrual period; but on this occasion labor did not set in till the two hundred and eighty-eighth day, a delay which caused her some uneasiness; but as I had before then

remarked that in the case of patients under the influence of ergot the term of gestation was likely to be prolonged, I considered it a good sign, and my prognosis was verified. Labor was in all respects normal. The first stage occupied about five hours, a longer period than usual with her; the second an hour and a half; the placenta was expelled in about twenty minutes, and there was not a wineglassful of blood lost; in fact, I think it was the most bloodless labor I ever witnessed. This lady was again confined eighteen months later; the same treatment was adopted. Labor did not set in till the two hundred and eighty-fifth day. There was no hæmorrhage.

Very recently a similar case occurred to me. A lady of rank wished me to attend her in her confinement. This I refused to do, especially as she resided some miles from town, but I promised her if she arranged with a medical man to sleep at her house I would go to her if any cause of anxiety appeared. She was the mother of ten children, and in her case also labor usually set in at about a week before the expiration of the normal term of pregnancy. Her two last confinements had been followed by alarming hæmorrhages, and her husband was very anxious about her. I treated her in exactly the same way as the last case. On this occasion, instead of labor setting in too soon, it did not occur till the two hundred and ninety-fifth day from the date of her last menstrual period; and Dr. Gleen, who attended her, can verify my statement that there was no hæmorrhage to speak of, that the child was vigorous, and that neither mother nor child exhibited any ill effects, though ergot or strychnine had been taken with short intermissions for nearly seven weeks.

I might easily quote other cases, but these are sufficient to prove, at least to my satisfaction: (1) That ergot, alone or in combination with strychnine, may be taken with absolute safety to both mother and child by pregnant women, in the usual doses, and for a considerable time. (2) That when taken continuously for not less than three weeks prior to the commencement of labor arrests the tendency to post-partum hæmorrhage, and facilitates the involution of the uterus.

When I was a student we were cautioned not to administer ergot to women in labor till the os was fully dilated, it having been shown that, unless the child was born within the space of two hours after the specific action of ergot was manifested, that is by the occurrence of short, sharp pains, with hardly any appreciable interval, the child was likely to suffer, and was not infrequently born dead. This statement I can verify as being perfectly true, but then the death of the child was not due to any poisonous property possessed by the ergot, but to the utero-placental circulation being interfered with in consequence of the rapid, almost incessant, contractions of the muscular fibres of the uterus. That this is so is proved by the fact that where the ergot failed to induce its specific effect the child did not suffer. True it is, that, as stated by McClintock, some children were born dead even when ergot pains had not been induced, but remember he wrote at a period when the forceps were very rarely used. During the six months I spent as a pupil at the Rotunda, the forceps were never, so far as I know, once applied. Labor was allowed to linger on sometimes for days, and when the fœtal heart ceased to be audible the head was lessened and the woman delivered. Now, perhaps, we run to the other extreme, and apply the forceps too frequently; but that a child should be stillborn whether ergot was given or not, when labor was permitted to linger on for days, is not to be wondered at; that the death of the fœtus was, however, due to the administration of ergot, when the true ergot pains did not occur, I disbelieve, and

this conclusion I arrived at while still a pupil, and its truth I am now convinced of.

The routine of giving a dose of ergot, when post-partum hæmorrhage has set in, is generally a harmless, and sometimes a useful practice. In perhaps one in twenty cases it may induce the uterus to contract, but to be of any permanent use the drug should be administered some hours previous to the occurrence of the hæmorrhage, and the dose should have been repeated at intervals of a couple of hours or less. If then we meet with a patient in labor in whom a tendency to post-partum hæmorrhage has been previously observed, ergot should be administered at once, and if delivery does not take place for a few hours, and if the dose be repeated, the result is likely to be satisfactory.

It is to be borne in mind that I am not discussing the methods by which post-partum or any other kind of hæmorrhage occurring unexpectedly during parturition should be treated, but that I confine myself to advocating the value of exhibition of ergot prior to the end of the period of utero-gestation in a certain class of cases, and I am far from under-estimating the advantage of rupturing the membranes, the use of friction over or compression of the uterus, cold externally, or hot-water douches when necessity arises, but I wish, if possible, to prevent the necessity for such.

Although foreign to this subject, I wish to state my experience of the use of ergot in cases of threatened abortion; in these, hæmorrhage without pain is often the first symptom, and that indicates that the ovum is partially detached; when wholly detached, hæmorrhage, as a rule, ceases, and the contents of the uterus are sooner or later expelled. But it is seldom that we can say with certainty when it has become hopeless to save the ovum, and therefore it is our duty to persevere in our attempts to do so as long as possible; and of all methods to this end, absolute rest in bed for a considerable time is without doubt the best. But it is most irksome to a patient, specially a mother with probably young children needing her care, to submit to the restraint imposed on her by keeping her bed for weeks, and many will refuse to do so; indeed, some women become so prone to abort that it seems useless to try to enforce prolonged confinement to their room, and then it is obviously better that the ovum should be quickly got rid of.

Such a case occurred to me some five and twenty years ago. About that time I had as a patient a delicate young married lady, who in the course of the preceding ten months had twice aborted at about the tenth week of her pregnancy, and on each occasion alarming hæmorrhage had occurred. I attended her on the second of these. She had become pregnant again within two months, and at the expiration of almost exactly the same time as on previous occasions, hæmorrhage set in, which she knew was the forerunner of another miscarriage. I saw her a few hours later. There were no pains, but the os was patulous, and her state identical with what it had been in the early stage of her previous illness. I came to the conclusion that she must certainly abort, and I at once put her on ergot and strychnine, with the view of getting rid of the ovum rapidly. The dose of ergot was repeated every two hours, and I watched this lady all day, hourly expecting that she would have a recurrence of the hæmorrhage which had so alarmed her and me on the previous occasion. But instead of this the hæmorrhage lessened; night came on, and she slept. Next day the os was not the size of a split pea. This lady went to the full term and gave birth, to her great joy, to a son, now a strong man six feet high.

From that day on I invariably administered ergot to women threatened with abortion. In some it produced no effect whatever; in a few it

induced uterine action, and the expulsion of the ovum followed. In the majority the threatening symptoms disappeared, and pregnancy proceeded normally; but in not one of them did I regret having administered ergot, and I am satisfied that if the ovum is not blighted—that is, ceased to be a living body — ergot acts as a uterine tonic, and renders the organ in many cases fitted to undergo the further changes which take place in it during utero-gestation, but if the ovum is detached and blighted, then it becomes, as it were, a foreign body, and ergot is then likely to stimulate the uterus, and to expel its contents. This opinion is, of course, based only on the results of my personal observation, but of its correctness I have no doubt.

Conclusions.

To sum up the whole subject as to the action of ergot in combination with strychnine, which is the formula I usually adopt, I venture to lay down the following as the result of my experience:

1. That when administered previous to the termination of pregnancy in the case of women in whom a tendency to post-partum hæmorrhage is known to exist, it tends in a marked manner to prevent the occurrence of hæmorrhage.

2. That when so administered in ordinary doses, it does not produce any injurious effect on either mother or child, and that its exhibition seems to delay the commencement of labor in such case.

3. It tends to make the involution of the uterus more perfect, and lessens the chance of the occurrence of subsequent uterine troubles, many of which depend for their cause on imperfect involution of that organ.

4. It will not bring on premature labor or induce abortion unless uterine action has previously been set going.

5. In cases of threatened abortion its administration frequently seems to act as a uterine tonic, and in some cases tends to avert the danger of a miscarriage, provided the ovum be not blighted.

6. That if the ovum be blighted, and specially if it be detached, ergot usually hastens its expulsion.

Since writing the foregoing, I observe in the "Epitome" which appears in the *British Medical Journal* of January 16th, an abstract of a communication made by Professor Schwab on the efficacy of quinine as an oxytoxic. This drug, he maintains, "stimulates the uterine fibres when once they have begun to contract of their own accord. Like ergot, it does not set contractions going." I have never administered quinine as an oxytoxic during labor, but it will be remembered that I have stated at the commencement of this paper that it was the unexpected immunity from post-partum hæmorrhage in a patient to whom I had administered quinine prior to labor, that induced me to carry out the preventive treatment I now advocate, and that it was quinine I first administered for this purpose. My observations, therefore, tend to confirm the views enunciated by Schwab as to the action of quinine on the uterine fibres, and further observations of the action of quinine as an oxytoxic should be made. I do not think, however, it would prove as reliable a drug for this purpose as ergot is. Schwab, too, confirms the opinion I have long held, that ergot does not originate uterine action.

CLINICAL AND BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.*

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As I was unable to be present at the morning session, I will take advantage of this opportunity to express

*Remarks made at the Conference of Health Officers held at Baltimore, February 17th and 18th, 1897.

my conviction of the great significance of this Conference. It inaugurates an important movement in the interests of public health in this State. By bringing together persons from various professions and walks of life, it will spread an intelligent interest in sanitary matters; it will lead to the education of the general public as to the importance of public hygiene and it should secure co-operation on the part of the great body of physicians with the efforts of municipal and State Boards of Health. There should result an educated public sentiment to support well-directed efforts of the officers of public health, to demand new sanitary legislation when needed and adequate means to carry out sanitary regulations and to aid in the solution of sanitary problems. The success of this first conference will, I trust, lead to a permanent organization with similar purposes and widened scope, an organization capable of being of material assistance to the various Boards of Health throughout this State.

To turn to the theme which has been assigned to me on this occasion, I must express a certain feeling of hesitation in talking before a mixed audience about the harmful bacteria. A half knowledge concerning the living germs of disease is calculated to give rise to exaggerated and alarming apprehensions which a fuller knowledge of the subject would correct. The general public entertains sentiments of great animosity toward all those members of the vegetable kingdom which are called "bacteria." They hear only of those bacteria which cause disease and little or nothing of the vastly greater number of bacterial species which are not at all harmful and many of which, indeed, are of the utmost service to mankind. The very existence and continuance of life upon this globe are dependent upon the activities of these lowly and much abused organisms. One might, with equal justice, cherish hostile feelings towards all of the higher plants because among them are a few poisonous species. The friendly bacteria have not received their deserts in public estimation. The mere statement that water, or milk, or various substances with which we come into contact, contain so many bacteria is of very little significance. It all depends upon whether harmful bacteria are present, and, fortunately, such bacteria are the exception and not the rule. Again, in this preface to what I have to say, I would call to your minds that we are fortunately provided by nature with admirable and manifold means of defence against the invasion and injurious action of even most of the harmful bacteria which we may chance to receive.

Dr. Stokes has already described to you the general characters of the diphtheria bacillus. He has demonstrated how it can be recognized and what use is made of it in the diagnosis of diphtheria, as well as many of the practical applications of this discovery. There is no longer any doubt in the minds of those who are fully informed upon the subject that the Klebs-Loeffler or diphtheria bacillus is the sole specific cause of diphtheria. Every inflammation of a mucous membrane or other exposed surface that is caused by this bacillus is not diphtheria, and any inflammation that is not caused by this bacillus is not diphtheria. But the mere demonstration that this organism is the cause of diphtheria simply confirms the faith of enlightened physicians that all infectious diseases are caused by micro-organisms. The practitioner of medicine has the right to inquire what practical results have come from the discovery, and to this inquiry it may be replied that there is perhaps no single bacterial discovery which has led to such important practical results as has that of the diphtheria bacillus. This discovery has shed light upon the causation and mode of spread of diphtheria; it has elucidated the real nature of the

disease; it has furnished a positive means of recognizing the disease and distinguishing it from other affections, and, above all, it has led to a method of treatment far surpassing in efficacy all other known methods. Those who demand immediate practical results from scientific discoverers ought surely to be satisfied with the outcome in this respect from the discovery of the bacillus of diphtheria.

The old discussion as to whether diphtheria is a local or a general disease has lost all significance in the light of the discovery of the bacillus of diphtheria and the study of its properties. One of the most important attributes of this bacillus is its power to produce a chemical poison of appalling potency. This poison may be compared in a general way and as to some of its properties to the poison secreted by a venomous serpent. In diphtheria the bacillus itself grows only or chiefly at the point of invasion, which is usually the throat, and its neighborhood, where it leads to inflammation, generally with the formation of a false membrane. Here, growing only superficially in the membrane, the bacilli secrete their terrible poison or toxine, which is absorbed into the circulation and causes the grave constitutional symptoms of the disease and serious damage to remote parts, such as the heart and the kidneys. The local lesion, the false membrane, is caused directly by the bacilli; the general symptoms and distant lesions are the result of the action of the specific poison.

The subject of serum therapy or the treatment of diphtheria by antitoxin does not belong to my theme and I shall only say in this connection that the efficacy of this treatment has passed beyond the experimental stage and is settled beyond all doubt. Antitoxin, where generally employed, has reduced the fatality from diphtheria at least fifty per cent. Thousands of lives have already been saved by its use and countless thousands will be saved in the future by a discovery resting entirely upon the results of experimentation upon animals.

The diphtheria bacillus affords a positive and practically unfailing means of diagnosis of the disease diphtheria and it is more particularly to this aspect of the subject that I have been requested, in the division of the general theme, to direct your attention. The possibility of this accurate diagnosis signifies much for the practitioner and for the patient.

Before the discovery of the bacillus of diphtheria the disease was diagnosed by certain symptoms and lesions, the most characteristic feature being the presence of a false membrane. This constitutes the clinical diagnosis of diphtheria, and it still remains the most available method of diagnosis for the great body of medical practitioners. The bacteriological diagnosis of diphtheria is not to be regarded as intended to supplant the clinical diagnosis or in any sense as antagonistic to the clinical method. It is simply a valuable additional aid in diagnosis, in many cases simply confirmatory of a diagnosis reasonably certain upon purely clinical grounds, and in doubtful cases of decisive importance. For the scientific study of many problems relating to diphtheria, bacteriological diagnoses of all cases studied are essential.

The question is of much practical importance whether the diagnosis of diphtheria by bacteriological methods necessitates any material readjustment of the views which had been reached by the anatomical and clinical study of the disease. In my opinion no such readjustment of these views is required, as would appear from some of the writings upon this subject. Our experience here in Baltimore has been that over 90 per cent. of the primary pseudo-membranous inflammations of the throat, which the physician upon clinical grounds alone would confidently diagnose as diphtheria, are in fact genuine diphtheria capable of demon-

stration as such by the detection of the Klebs-Loeffler bacillus. Statements, based upon the examination of large series of suspected cases of diphtheria, to the effect that not more than 60 to 75 per cent. of the cases are genuine bacillar diphtheria, are in a measure misleading, and it is not to be understood that all of these suspected cases relate to primary pseudo-membranous inflammations about the nature of which the practitioner would not be in doubt upon clinical grounds. It sometimes requires repeated, painstaking examination to detect the diphtheria bacilli in diphtheric exudates, although, as a rule, they can be found without much difficulty. So far, then, as these primary pseudo-membranous inflammations of the throat are concerned, no important readjustment of diagnosis is required as the result of bacteriological studies. Not a few, however, of the pseudo-membranous inflammations of the throat secondary to scarlet fever and other acute infections are due to other organisms than the Loeffler bacillus and are, therefore, not true diphtheria. The primary membranous croups are nearly all diphtheria.

But it is in the doubtful cases, and more particularly in the milder inflammations of the throat with little or no false membrane, that the bacteriological diagnosis is of prime service. Here the clinical diagnosis alone is generally not decisive. Some have been very reluctant to include these mild cases under diphtheria, but the conception that diphtheria may manifest itself in the form of mild non-membranous inflammations was not introduced by the bacteriologists. There were not a few excellent clinicians who advocated this doctrine long before the bacteriological era. One sometimes hears to-day the statement that bacteriologists demand that every throat harboring the Loeffler bacillus should be regarded as affected with diphtheria. Such a view is as ridiculous as to consider the presence of the streptococcus upon the healthy skin as indicative of erysipelas. The bacillus must not only be present but it must be doing harm by unfolding its pathogenic activities, that is by setting up inflammation. The whole point, however, is that this inflammation may be mild, without membrane, as well as severe, necrotic, with membrane, and the mild non-membranous inflammations are just as truly diphtheria as are the membranous types. The presence of diphtheria bacilli in healthy throats, which have not recently been the seat of diphtheria or which do not subsequently become diphtheric, is a rare occurrence. The recognition of the mild cases of diphtheria, which can be positively diagnosed only by bacteriological examination, is of no little practical importance, for such mild cases may become severe and they are capable of spreading the disease to others, even in malignant form.

The physician will do well during periods of prevalence of diphtheria to consider all sore throats in children, certainly all in households where undoubted diphtheria exists, as suspicious of diphtheria. The explanation of the relative mildness of the inflammation in some cases of infection with the diphtheria bacillus may sometimes be the weakened virulence of the infecting bacillus, but it is more frequently attributable to more than usual resistance on the part of the individual to this organism.

As the chairman of this meeting has alluded to the prevalent belief that cats may acquire diphtheria and be the means of transmitting it to human beings, I may be permitted to touch upon this point, although it is not strictly relevant to my theme. Noah Webster, in his curious book on "Epidemic and Pestilential Diseases," published at the end of the last century, noted the coincidence of cat distempers with malignant sore throat. More recently Klein has brought together the evidence on this point and

thinks that observations which he has made support the popular belief, but his observations do not seem to me convincing. In an address before the Medical and Chirurgical Faculty of this State about five years ago, I referred to this matter and expressed a desire to make bacteriological examinations of cats suspected to have diphtheria or to be agents of conveyance of the disease, but no opportunity for such examination has presented itself. In my judgment there is no conclusive evidence that cats are ever spontaneously infected with the diphtheria bacillus, although they are susceptible to experimental inoculation with it.

It is not to be expected that the practitioner of medicine, as a rule, will himself make bacteriological examinations in cases of suspected diphtheria. Relatively few have either the training or the appliances for such examinations, even if they have the time. Students who are now educated in our best medical schools are taught bacteriological methods and in their future practice should be able to make such examinations as those required for the bacteriological diagnosis of diphtheria. From what has been said, the clinical diagnosis in many cases is sufficiently positive for all practical purposes. The physician should not delay the use of antitoxin in suspected cases of diphtheria in order to await the results of bacteriological examination. There remain, however, a sufficient number of cases where it is of the utmost importance that means should be at the disposal of the physician through which he can secure the advantages of bacteriological examinations by skilled experts. Nor is it simply for purposes of diagnosis that such examinations are required.

I would, therefore, in conclusion, emphasize the great value to the medical profession and to the interests of public health of the establishment of well equipped and properly directed bacteriological laboratories in connection with the municipal and State Boards of Health.

A model in this respect is the laboratory of the Health Department of New York city, which has already accomplished results demonstrating the great benefits to the medical profession and the general public of such laboratories. The impulse for the establishment of this laboratory was the cholera scare a few years ago. The fear of Asiatic cholera has been one of the great levers of sanitary reform in this century. Here in Baltimore a bacteriological laboratory has been started in connection with the Health Department. It should receive the hearty support of the medical profession and its capacity for usefulness should be extended by ampler provisions for its support, whereby it may be made more serviceable not only to this city, but to the entire State.

MEDICAL DEFENCE.

The report of the Council of the Medical Defence Union, which was presented to the annual meeting held last week, is an interesting document, especially at the present moment. In one of its earliest paragraphs stress is laid on the fact that while the greater number of questions which occupied the attention of its Council and committees during 1896, as in previous years, were concerned with the defence of individual subscribers to the Union who sought its aid, yet several matters arose upon which it was felt necessary to take action in the interests not of individual members, but of the general body of medical practitioners in the United Kingdom, whether members of the Union or not.

Several examples of the kind of work for collective defence thus done are given in the report. In several cases proceedings were instituted under the Apothecaries Act, and it is reported that in every instance the

person charged was fined the full penalty, with costs. In another instance a person who called himself "oculist and aurist" was prosecuted, and a fine was imposed on the defendant for assuming titles which implied that he was recognized as surgeon. In another case which was taken into the courts a conviction was obtained and upheld on appeal for the user of the title "M.D.U.S.A." This would appear to be the first successful prosecution for the assumption of that particular title. The report, however, goes on to point out that in a similar prosecution instituted in another part of the country the magistrate had refused to convict, and had been upheld in this refusal by the judges of the Appellate Court. This is not the only instance of opposite decisions being given in apparently similar actions brought under the Medical Act, 1858, and the experience of the Union during the past year fully justifies the statement of Mr. Justice Collins, made from the Bench, to the effect that the law as interpreted by some magistrates and judges is "in such a state of fog that it was impossible to say what were decisions of law and what were decisions of fact." This judicial pronouncement lends weight to the contention that the Medical Acts are not fulfilling the purpose for which they were designed, which was, to quote the words of the preamble of the Medical Act, 1858, that "it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners."

The need for the amendment of the law to which the Council of the Medical Defence Union point has already been under the consideration of the Parliamentary Bills Committee of the British Medical Association, which has a special sub-committee for dealing with this matter and the Midwives' Registration Bill. It would, however, appear that it would be practically hopeless to expect that time would be found in the House of Commons for the consideration of any private measure for the amendment of the Medical Acts. It will be desirable, therefore, to concert means to bring the need for an amending bill forcibly under the notice of the Government. The position of affairs illustrates the extent to which the work so long undertaken with much success by the British Medical Association overlaps that part of the work of the Medical Defence Union which is defined in its Articles of Association as the suppression or prosecution of unqualified practitioners.

Both in the report of the Council of the Union and in the speech of its president much prominence is given, and very justly, to the great amount of work which the Medical Defence Union is thus doing for the general good of the profession, and Mr. Horsley seemed disposed to complain that while this work of the Union with regard to collective defence was of the utmost value to the profession as a whole, the Union did not receive the credit which was justly due to its members for the public spirit displayed in enforcing laws, enacted indeed, for the benefit of the public at large, but having a bearing so important on the interests of the medical profession.

These two aspects of medical defence—the individual and the collective—have been defined with sufficient precision in the report of the Committee on Medical Defence appointed by the Council of the British Medical Association. This report, published in the *British Medical Journal* of January 30th, and now under the consideration of the branches, tabulates as among the duties involved in medical defence "(*d*) The protection of the privileges and interests of members of the medical profession generally, and also as affected by any particular legislation; (*e*) Proceedings under the penal or any other clauses of the Medical Act, 1858; (*f*) Proceedings under the penal clauses of the Apothecaries Act, 1815; (*g*)

Proceedings under any other Act affecting the interests of the medical profession."

The opinions expressed by those branches of the Association which have already met to consider the question are conflicting. From the reports which have as yet been forwarded to the *Journal*, it appears that while the Perthshire Branch, the North of Ireland Branch, the Oxford and District Branch, and the Bath and Bristol Branch have expressed opinions in favor of the Association taking up the work of medical defence, both individual and collective, the Aberdeen, Banff and Kincardine Branch, the Border Counties Branch, the Staffordshire Branch, the Dundee and District Branch, the Dublin Branch, and the Birmingham and Midland Counties Branch have rejected the proposal at their recent meetings. Unfortunately, at some of these meetings the attendance has been small, and we would strongly urge upon the members of all those branches the meetings of which have not yet been held the importance of attending when the matter comes up for consideration, so that the expression of opinion may be sufficiently distinct and indisputable to enable the Council of the Association to form a correct estimate of the true opinion of the members of the branches of the Association in the United Kingdom.—*British Medical Journal, March 6th, 1897.*

THE HYDRIATIC TREATMENT OF TYPHOID FEVER.—Elmer Lee (*Chicago Medical Recorder*), instead of cold bathing in typhoid fever, uses the following method: Water at a temperature of 75° from a fountain syringe hanging from the bedpost is directed through a small sprinkle nozzle first on the front and then on the back of the patient's body. Only a small amount of water is used. After the bath the patient is covered with a blanket, and the water from the spray is allowed to evaporate. This sprinkle bath is repeated every two hours for forty-eight hours or so until improvement is manifest, when the intervals are gradually extended. The internal treatment consists in the frequent administration of water with a little digitalin. The colon is also irrigated from time to time with warm water by means of a fountain syringe. A compress of linen wrung out lightly from ice-water is placed over the abdomen and covered with flannel. This is changed every hour. No food is given until the patient is fully convalescent. The internal administration of water is based both upon physiological data and experiment. It keeps the blood fluid; it prevents dryness of the skin and mucous membrane; it cleanses the system of waste and is agreeable to the patient; and there is absolutely no contraindication to its use. No case of fatality from typhoid fever has occurred in the author's practice for eight years, or since the adoption of the hydriatic method of treatment. His conclusions are as follows: (1) The internal administration of soft water, in definite doses, of proper temperature and at regular intervals (with a satisfactory placebo always incorporated), according to the age and sex of the patient, the temperature of the fever and the character of the urine, against which there are no veritable contraindications. (2) The application of water of suitable temperature to the surface of the body, preferably in the form of a sprinkle or rain contact, at frequent and regular intervals, as indicated by the severity of the symptoms and the age and sex of the patient. (3) The application of compresses of linen wrung dry from iced water, applied over the abdomen and to the head and neck as often as necessary, and so long as the fever continues. (4) The use of warm, cool, or cold irrigations of the colon, with plain, soapy, or normal salt water, from one to four times a day, and from one to three litres in quantity, during the acute

stage and while there is fever. (5) Owing to the absence of hydrochloric acid and peptones to the gastric juice during the febrile stage in typhoid fever, food of every character and of any quantity is contraindicated, and can only augment the complications and prolong the disease. (6) In collapse and exhaustion from hæmorrhage, intravenous transfusion from from one-half to two litres of normal salt solution is indicated and strongly recommended. The transfusion or subcutaneous injection is to be repeated from time to time if there are ur favorable reactions after such use. (7) Drugs and stimulants are absolutely contraindicated, as they are not essential to nutrition, but further increase the labor of the system and exhaust the vitality in the process of oxidation and elimination of tissue waste and toxic products. (8) In the hydriatic management of typhoid fever, ulceration and perforation of the intestine has never been known to take place; also, there are no distressing after effects, as there are no sequelæ. (9) It is the author's experience and his belief that when cases are seen within the first five days, typhoid fever can be aborted and convalescence established within ten days to two weeks. (10) A treatment which is so simple, and which has been prov- by hydriatic experience with many thousands of cases, ought to secure its adoption by the whole profession in the interest of science and for the benefit of the sick.

THE TREATMENT OF UMBILICAL HERNIA.—Sebileau (*Sem. Méd.*) divides umbilical hernia into three groups: (1) Hernia neonatorum: This either (*a*) contains most of the viscera, and is a condition incompatible with life, or (*b*) is smaller and is covered with a thin layer formed by the amnion, if arising in the embryonic period, or by a double layer of skin and peritoneum if formed during fœtal life. The operation which should be performed in these cases differs from that in the adult only in the ligature of the umbilical vessels and cord. (*c*) It may be quite small, when it should be treated as group (2). Hernia in children must be treated according as it occurs (*a*) in infants who cry, cannot walk, but soil their clothes (1 to 15 months); (*b*) in those who seldom cry, can walk, and are clean (2 to 8 years); (*c*) in older children. For group (*a*) no treatment is needed as a rule, as most are cured spontaneously. If anything is needed a four-shilling piece wrapped in cotton wool and kept over the umbilicus by crossed pieces of strapping is best. Nothing is worse than the common spherical apparatus, which penetrates the ring and prevents natural cicatrization. In group (*b*) everything must be tried to cure the hernia, but operation is seldom justifiable. All ordinary bandages applied by the mother are useless. The best apparatus is that of Fournier des Lempdès. It consists of a piece of aluminum moulded to the subjacent musculo-aponeurotic layer, and therefore hollowed out to allow the recti free play, and having a semi-cylindrical projection fitting into the linea alba, but interrupted at the aperture of the ring so as to allow of its closing. This plate is kept in place by a flat band of elastic attached to its sides and passing behind the body. The hernia cannot escape unless the child retracts the recti voluntarily, and this he must be taught not to do. In group (*c*) cure cannot be expected, and although an apparatus may be tried, the necessity of operation must be considered. (3) Hernia in adults: There are two well-defined classes of cases—(*a*) when the surgeon is forced to operate by the occurrence of acute complications (strangulation, etc.), and (*b*) when no acute complication is present. Here the only contra-indications are those of general health, such as obesity and emphysema, especially in old age, and advanced

diabetes. In every other case radical cure ought to be advised, and in such as have shown signs of obstruction previously be insisted on. If no operation is done a truss such as that of F. des Lempdès should be worn if the hernia is reducible and can be kept in place, but if this is impossible it is better to leave it alone altogether. Operation: (*a*) Radical cure for a reducible hernia in a young subject is simple. The sac is dissected out and cut off at the neck, and the abdominal wound closed. (*b*) Radical cure with omphalectomy: With old-standing herniæ containing omentum, and with a very large ring, the operation is more difficult, chiefly owing to adhesions. First, a very long incision must be made through the skin, taking care not to wound the sac. The latter must then be opened freely, adhesions separated, the omentum resected, and the intestine returned. Two large curved incisions are then made on either side of the ring through the skin and the sac adherent to it; the fibro-muscular layer is well exposed, and the umbilical ring resected. To close the wound an incision is made rather more than an inch from the margin in the sheath of the recti. The deepest layer of sutures unites from right to left, the peritoneum and the deep layer of the sheath of the recti, the middle layer unites the muscles and superficial layer of the sheath, and the superficial layer of sutures unites the skin. This method gives a very firm cicatrix.

THE DIAGNOSIS OF TYPHOID FEVER AND WIDAL'S TEST.—Hædke of Neisser's clinic (*Deut. med. Woch.*), says that puncture of the spleen and the bacteriological examination of the blood gives relatively certain results, but the method is not always available. He has employed it in a large number of cases, always with a satisfactory result. In one case a laceration of the splenic capsule and extravasation of blood (nearly 100 c. cm.) were found, but the puncture was not responsible for the death. The author has also tried Elsner's method, but only in a small percentage of cases could the typhoid bacillus be thus satisfactorily demonstrated in the stools. He thinks that Elsner's method constitutes an advance, but is not certain. Widal's test has given remarkably good results. Sufficient blood (5 to 6 c.cm.) can be obtained from the finger-tip by means of a lancet if a little pressure is used. A young, vigorous culture of the typhoid bacillus, not more than eighteen hours old, is selected. The author does not use a bouillon culture, but obtains the bacilli from the water of condensation collecting in the agar tube. With this culture the bouillon and microscope tests are carried out. The bouillon test is the more certain. The serum and bacilli are added to a bouillon tube, and the whole is examined in 2, 8, 12, and 24 hours. Instead of an evenly divided turbidity, a distinct flocculent appearance is noted, and the bacilli thus sink to the bottom, mostly in six to eight hours. The relative amount of bouillon and serum is important. In every one of twenty-two cases the author obtained a positive result. In twenty cases of other acute disease the result was negative with the exception of one case, where the result was rather doubtful. The patient had suffered from an illness resembling typhoid fever ten years previously, but the appearance of the bouillon culture was really different here from that obtained in genuine typhoid fever. The bouillon became finely granular, and after shaking resumed the appearance of non-typhoid bouillon. If a drop of typhoid serum was inoculated with typhoid bacilli and examined, the movements of the bacilli were seen to cease, and agglutination and change in form resulted. Sometimes the effect was instantaneous. A negative result was obtained in non-typhoid cases. The author believes that if

these appearances rapidly supervene, the case may be looked upon almost certainly as typhoid fever. In other cases the bouillon test should be used in addition. How long the serum retains its agglutinative power cannot be definitely stated. These cases were examined in the first to sixth week of the disease and one in a relapse. The author gives some details of the more striking cases.

A NEW METHOD OF PREPARING DIPHTHERIA ANTITOXIN.—Behring (*Fortschritte der Medicin*) strongly opposes the view that the evil sequences which have been ascribed to antitoxin are really due to the antitoxin. He emphatically asserts that "diphtheria antitoxin, the real and only substance of therapeutic significance in the antitoxic serum, is absolutely harmless, and can never under any circumstances, in man or beast, in the healthy or unhealthy organism, produce any toxic effect whatever." The evil sequences observed after antitoxin treatment are entirely avoidable; they are due to albuminous bodies, salts and accidental impurities, all of which have no therapeutic value. The living cells of the organism are found by experiment to be entirely uninfluenced by the antitoxin; whatever changes occur in them are due to the serum, and are produced equally by serum taken from a healthy animal—a fact further proved by the identity of the changes, whatever the amount of antitoxin in the serum. In order to eliminate partially or entirely the noxious substances mentioned, Behring has tried two methods of preparation of the antitoxin. He first obtained serum containing very concentrated antitoxin, and in this way hoped to minimize the dose of the serum required, and so to inject as little as possible of the noxious substances. A serious objection to this method was found to exist, for it was observed that these concentrated solutions quickly lose their strength by keeping He has therefore devised a new method: a dried form of antitoxin has been prepared, which is easily soluble in water. It is free from carbolic acid, contains no preservative, and is protected from micro-organisms by sealing in a closed vessel; one gramme of the dried preparation is equivalent to 5,000 normal units. In this way it is claimed that all evil sequences are avoided. Behring has further made some experiments on the absorption and excretion of antitoxin. He finds that it does not form any chemical combination in the living organism, but circulates in the body fluids unaltered, and is gradually excreted in its unaltered condition. The rate of excretion, which was observed in the milk and urine of a goat, varies much; but it was found that an increased dose of antitoxin caused disproportionate increase of excretion. Therefore, in attempting to prolong the period of immunity conferred by antitoxin, it is better to repeat the dose than to increase the strength of the dose, for the repetition gives more certain prolongation of immunity.

ALIMENTARY ALBUMOSURIA.—Chvostek and Stromayer (*Wien. klin. Woch.*) have devised a method by which Maixner's discoveries as to albumosuria can be utilized in the diagnosis of intestinal ulceration. Maixner found that in some cases of cancer of the stomach and of typhoid fever peptone could be detected in the urine; this result, which was confirmed by Hofmeister, he attributed to a defect in the assimilative power of the mucous membrane, the amount of peptone excreted being proportional to the extent of the lesion. Later researches showed that the substance detected in the urine was really not peptone, but albumose, and that its appearance was not sufficiently constant for diagnostic purposes. To obviate this difficulty the authors tried the effect of replacing the midday meal of patients suspected of suffering from gastric or

intestinal ulceration by one or two ounces of peptone or somatose given in warm water or broth. The urine, which had previously been tested for albumin, the experiments only being carried on when this was absent, was examined for albumose by Devoto's method at intervals of two or three hours. Notes of nine cases are given, in six of which the feeding with peptone or somatose induced the appearance of albumosuria to a greater or less extent; the symptoms referable to the alimentary canal varied very widely, but in each instance the presence of tuberculous ulcers of the intestines was demonstrated post mortem. In the remaining three cases similar ulcers existed, but albumosuria could not be produced; this may have been caused in part by the presence of vomiting, on the one hand, and constipation on the other, interfering respectively with the ingestion and the absorption of the test substance. In twenty people without disease of the alimentary canal the administration of these foods invariably failed to induce albumosuria. The authors conclude that in normal individuals, or in those the mucous membrane of whose intestines is free from serious lesions, such as ulcers, it is impossible to cause the appearance of albumose in the urine by giving it, in however large quantities, in the food. Where, however, ulcerative processes are present in the bowel, the excretion of albumose may result. It is only the presence of this alimentary or enterogenous albumosuria which can be accepted as a proof; the negative result cannot be held to exclude the existence of ulcerative processes.

PREVENTION OF PUERPERAL CONVULSIONS.—J. N. Upshur, in a paper read before the Richmond Academy of Medicine, records (*Virginia Med. Semi-Monthly*) five cases illustrating the prevention of puerperal convulsions. He emphasizes the necessity of the early engagement of the medical man by the patient and his subsequent close supervision of the case. The urine may yield negative evidence, but severe head symptoms (headache, vertigo, etc.), and a hot, dry skin may warn us of danger. Excessive eating and overloading of the stomach are exciting causes. The preventive means are care of the diet, regular exercise in the fresh air, and special attention to the bowels and kidneys. In the attack Upshur recommends chloroform, bleeding, and active purgation, with prompt delivery of the child. If the patient remain unconscious after delivery, with symptoms of depression, a hypodermic injection of strychnine nitrate will do good by sustaining the heart, diminishing the cerebral congestion, and keeping up the contraction of the uterus; morphine is positively contra-indicated. In the discussion which followed the reading of Upshur's paper several speakers testified to the good results they had obtained from the use of veratrum viride in such cases.

EXPERIMENTAL ECLAMPSIA.—Van de Velde (*Wien. klin. Rundschau*) seeks to give the auto-intoxication theory of eclampsia an experimental basis. He began by comparing the ease with which the injection of human urine induces convulsions in pregnant and non-pregnant rabbits, finding that the average dose required is in the former case 9 c.cm. per kilog. of body weight, in the latter 20 c.cm. per kilog. In only one out of 37 pregnant animals experimented upon was there any difficulty in evoking convulsions. The causes of this increased susceptibility may be two in number: the presence of a greater proportion of the toxins producing convulsions in the blood of pregnant animals, or a greater vulnerability of their nerve centres to these toxins. Now the author finds that if the blood of a gravid and non-gravid animal be injected at different times into the same rabbit, 18 c.cm. per kilog. of the former

induce eclampsia, as against 25 c.cm. per kilog. of the latter. If urine be substituted for blood, the figures are 18 and 30 c.cm. per kilog. The author concludes from these experiments that pregnancy leads to the formation in the female organism of substances whose principal action is the causation of convulsions, that these substances are normally eliminated by the urine, and that they circulate in the blood to greater extent in pregnant than in normal animals, indicating in the former an excess of production over excretion. He further finds evidence of the increased susceptibility of the nerve centres during pregnancy, in that for some days after delivery the animal is more easily convulsed by the injection of blood or urine than the normal, although its own urine is no longer abnormally toxic. Van de Velde hence argues out the whole question of eclampsia, finally accepting Bouchard's views as to its cause being auto-intoxication by the accumulation in the blood of the "toxins of pregnancy."

CAUSE OF DEFORMITY IN ARTHRITIS DEFORMANS.—Potain (*Sem. Méd.*) discusses the causes of deformity in arthritis deformans. There are two varieties of these: changes in the shape of the extremities of the bones, and changes in the muscles acting upon the joints which give the latter their abnormal directions The thickening of the head of the bone gives rise to pain and difficult movement, but does not constitute ankylosis. Serious difficulty may arise from this, as, for instance, in the atlanto-axial articulation, in which the enlarged bone causes compression of the mudulla. The ligaments are rarely involved, but are sometimes relaxed. The irregular swelling of the bones is only an accessory cause of deformity, contraction of the peri-articular muscles determined by spasmodic contraction, paresis or atrophy being the chief cause. Muscular paresis may supervene at an early stage; it chiefly affects the hands and feet. The resulting deformities are so constant as to suggest that they follow in their production certain definite changes; as a matter of fact they can always be explained by the existing muscular changes. The loss of muscular power leads both to functional impotence in the joint and to change in direction. The muscles that are the least well nourished are the first to lose their energy. It has been asserted that chronic osseous rheumatism is an affection of the nervous system; this is only true in part. The nervous system is not the causative agent of the muscular paresis, which may be equally determined by a traumatic arthritis. The muscles in functional relationship with the articulation become weak, paralyzed, or atrophied by reason of the articular lesion. This may be due to a reflex nervous action, but the spinal cord is in such cases not in the least diseased. To detect deviation before there is any articular manifestation is of the greatest practical importance.

COCAINE ANÆSTHESIA. — The method employed by Wyeth (*Medical News*) is briefly as follows: The needle is carried obliquely through the epidermis until the point is in the Malphigian layer, just beneath the epidermis. Arriving at this point, force out a half minim of 4 per cent. solution. The epidermis and skin turn white, and, with the needle still in position, with a sharp-pointed knife make an incision as far as the anæsthesia has spread. Then insert the needle one-quarter of an inch from the first point, and the incision thus extended if necessary. In this way we obtain the greatest area of anæsthesia from the minimum amount of cocaine, and whilst we are certain of reaching the nerve endings, we avoid the risk of injecting the drug into the circulation.

THE DOMINION · MEDICAL · MONTHLY

... AND ...

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EDITOR:
BEATTIE NESBITT, B.A., M.D., F.C.S. (LOND.)

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"NEW HEALTH REGULATIONS."

The Provincial Board of Health Act from a very small beginning has been built up piece by piece, amendment here and amendment there, until it is now a noble structure, of which its architect might well be proud. That it is broad and all-embracing is just beginning to dawn upon the minds of those whom it is likely to affect. Yet while many may be temporarily inconvenienced by some of its clauses, there is no doubt that eventually it will be a source of invaluable benefit to the whole Province, not only from a health, but also from a financial, standpoint.

To deal more particularly with the point which is at present before the public, the question of testing dairy cattle for tuberculosis and thus ensuring a pure milk supply, no fault can be found with the Provincial Board. The Act says very clearly that a municipality may do certain things, there is not the slightest compulsion; but if they do decide to do these things, the Health Act states how they shall do them, and this is only as it should be, for in all matters, as has been found in the case of local option, half a system is worse than no system at all. The Provincial Board pointed out what was necessary to have a pure milk supply, leaving an option with the municipality or corporation whether they would have pure milk; but if the locality decided to have pure milk, the Provincial Board, in justice to themselves, proposed that the system of inspection should be no farce. Toronto was fortunate in possessing a health officer who united to his scientific attainments and executive ability an independence not too often found among civic officials, and Toronto, through its health officer, decided to have pure milk. Having

decided this, they then came under the operation of the Health Act, and had to have all milch cows whose milk was brought into the city tested by a competent veterinarian with tuberculin, the charge to be borne by the owner of the cows. In order to make the cost as little onerous as possible, a rate was arranged, on consultation with a number of leading veterinary surgeons, for the fee for the test. This fee ranged from about $2.50 for a single cow to $10 for ten. When you consider that the veterinary has to make the injection of tuberculin, and for the next twelve to eighteen hours has to tal the temperature of each animal at regular intervals, the charge is certainly reasonable.

Then, again, the Provincial Board of Health furnishes the tuberculin at absolute cost, the amount required for a dose costing from 15 to 20 cents.

As far as we can learn, the dairymen have not objected to the test, and have been quite willing in every way to assist the authorities in procuring pure milk; but what they do object to is that they should have to pay for this test, and, in our opinion, they seem to have, from precedent, the right on their side. The city, for instance, inspects meats; the farmer does not pay for that inspection. The Government inspects all food products, spices, baking powders, liquors, but the manufacturers and vendors of these articles do not pay for this inspection; why then should they—dairymen – be treated differently from other classes in the community? The question, of course, as to who should pay for this is entirely aside from the value of the Health Act, and we believe that even if the cattle owners are compelled to pay for the testing, they will, in the end, reap great benefit, for it means that if Toronto refuses to be supplied with milk from tuberculous cattle, the dairyman who comes to the market to purchase a milch cow will not purchase her unless accompanied by a certificate that she is free from taint, so that he has only to test his herd once. After that the men from whom he purchases will pay for the inspection, and will, of course, include it in the price of the cow. As it will then be impossible to dispose of tuberculous cattle in Toronto, it will necessarily follow that all the other towns will become markets for this class of animals; they, in self defence, will have to pass similar laws, and it will shortly follow that the cattle of Ontario will present the cleanest bill of health of any cattle in the world. The knowledge of our methods, when they become known to the scientific veterinarians and health officers of England, will do more to remove the embargo from cattle than all the inspectors or representatives of governments. The Government may send long reports in regard to the absence of disease among Canadian cattle, of the systematic inspection of Canadian farmers' stock, only to have the public accounts looked up to see that in inspecting the millions of cattle in Ontario the Government spent something like $1,000 in one year, and the authorities in England put their reports where they properly belong—in the waste-paper basket.

Since this editorial was written, the Government have been waited upon by the dairymen, and have cheerfully complied with their request, that the Act do not go into operation for two years. We cannot blame the Government for this, if we look at it from their standpoint, as certainly the votes of the dairymen are of more value to them than the health of our citizens.

"THE COUNTY HEALTH OFFICER."

There is another side to the question of a health officer for each county, who shall be in charge of a laboratory, whose duty shall be the making of bacteriological diagnosis of suspected cases for diphtheria.

Recently there was a case in New York where the physician attending a patient supposed to have diphtheria, inoculated a tube from swab in the usual manner, and sent this to the health officer for investigation, the child in the meantime being isolated, and the regular remedies applied. The health officer, not being satisfied with the first specimen sent, asked for another. On this they failed to report. In the meantime the symptoms became alarming, and the physician administered antitoxin, following which the child improved and eventually entirely recovered.

Then comes the amusing part of the case. The parent of the child goes to the health officer for a clearance certificate, and is informed by the officer that there was no diphtheria in his house. The parent immediately turns around and discharges the physician, on the grounds that what he said was diphtheria was not diphtheria, and that he had made a wrong diagnosis, and refused to pay the bill. It is satisfying to note that an officer so careless and thoughtless was discharged. But this does not benefit the physician, who loses not only his recompense but his reputation. As the *Medical Record* fittingly points out, the physician who had the whole clinical picture of the disease before him, was the best judge of the nature of the malady, the health officer to the contrary notwithstanding.

While we do not expect a contretemps like this would occur here, yet it is sufficient to be a warning that if we do have county health officers they should act as the co-partners of the practitioner, not as his critic.

CLINICAL SIGNIFICANCE OF THE CHILD'S FONTANELLE.—Dr. Abt (*Medicine*) concludes his paper on the above subject as follows: (1) Involution of the fontanelle occurs normally from the fifteenth to the eighteenth month. From birth to the ninth month the fontanelle decreases gradually in area, and from this time till complete closure the decrease is more rapid. Retardation of normal involution indicates rachitis or hydrocephalus. (2) The fontanelle presents pulsatory and respiratory phenomena. The pulsation increases if the tension is slightly increased; diminishes or is lost if the tension be greatly increased. (3) A murmur over the fontanelle occurs in a certain number of children, most commonly in those who are anæmic or rachitic. It is not pathognomonic. (4) A slightly prominent and pulsating fontanelle indicates a cerebral hyperæmia, such as occurs in fevers. (5) A protuberant and tense fontanelle indicates an exudation or inflammation in the cranial cavity. (6) Retracted fontanelle indicates a condition of collapse, brought about by acute intestinal disease with profuse watery discharges, infantile atrophy from any cause, hæmorrhage, effects of prolonged acute infectious disease, or marantic sius thrombosis. (7) In acute infectious diseases with meningeal symptoms, examination of the fontanelle shows no protuberance or tension, whereas in true meningitis these conditions are marked. (8) In the so-called hydrocephaloid, a terminal condition of cholera infantum marked by the occurrence of striking meningeal symptoms, the fontanelle is retracted.

IMPORTANCE AND TREATMENT OF ENDOMETRITIS.—W. P. Carr (*Virginia Med. Semi-Monthly*) attempts to explain why it is that some cases of endometritis lead to serious inflammation of the uterine adnexa, while in others the Fallopian tubes are little, if at all, affected. He believes that the danger is regulated by virulence of the germ and the degree of obstruction in the cervical canal. In the non-puerperal uterus the risk of the inflammation spreading to the tubes is little save when the cervical canal is obstructed, or the infection gonorrhœal in nature; and,

even in the latter case, it is probably the marked swelling of the cervical mucosa induced by the gonococcus that leads to the tubal extension. With regard to treatment, Carr would attend first to the general health and then employ local means, among which he regards drainage of the uterus as the most important. Gauze drainage is "worse than useless," and the Outerbridge silver drainage tube is to be preferred. The vagina must be kept aseptic by tampons saturated with glycerine and iodine.

Miscellany.

ANATOMIC FOUNDATION OF ACUTE DELIRIUM.—Prof. N. M. Popov recently had an opportunity to study the cerebral lesions in the case of a woman who had died from acute post-puerperal delirium. The nerve centres showed important modifications, the cerebral parenchyma was also affected, the pia mater and the superficial layers of the cortex were full of vascular lesions like small interstitial hæmorrhages, while the neuroglia and nerve cells were perceptibly altered, the whole resembling what occurs in cholera, presenting the picture of a diffuse meningoencephalitis with hyperplastic alteration of the cerebral substance itself. The conclusions to be drawn from these facts are that the conditions are undoubtedly due to some infection as in the case of cholera.—*Bulletin Médical.*

THE EARLIEST MEN.—Dr. Ranke, of the German Anthropological Society, recently undertook to describe the physical characteristics of the earliest men, as ascertained from the examination of prehistoric graves. They were of a yellowish color, he said, and had coarse hair. Their heads were peculiarly shaped, the part of the skull which contains the brain being large relatively to the face, while the face was small. They had other peculiarities, among which was the rudimentary or undeveloped condition of the third molar, or back grinder tooth. The doctor believes that the first men originated in Asia.

ANTIVACCINATORS.—Pennsylvania shares in the distinction of possessing a so-called Anti-compulsory Vaccination League, the president of which and ten vice-presidents appear to be homœopathic physicians. At a recent meeting a petition to the Legislature was adopted, asking that the compulsory vaccination law be repealed.

NEW YORK POLYCLINIC.—The trustees of the New York Polyclinic Medical School and Hospital have decided to rebuild on the site of their former building, No. 214 to 218 East Thirty-fourth Street. The work will be begun immediately.

CAN GIVE OPINION BEFORE FACTS.—When it is shown that a medical expert has made the proper professional examination of the patient in order to ascertain the existence of some physical or mental disease, the Court of Appeals of New York, in People *v.* Youngs, December 15, 1896, has decided that he is then qualified to express an opinion on the subject, though he may not yet have stated the scientific facts or external symptoms upon which it is based. At the same time, the Court thinks it undoubtedly the better and safer practice to require the witness to state the circumstances of his examination, and the facts, symptoms or indications upon which his conclusion is based, before giving the opinion to the jury. But, if the opinion is given first, all the facts or symptoms upon which it is based may be drawn out also either upon the direct or cross-examinations.

CHRONIC DIARRHŒA AND DYSENTERY—

℞ Cupri sulphat,
Morphine sulphat....āā 1 gr.
Quiniæ sulphat ..... 24 grs.

M. ft. pil. No. xii. Sig.: One pill three times a day.—*Med. Bulletin.*

FEVER BLISTERS—

℞ Camphor ..... ʒ grs.
Arrowroot, powdered 30 grs.
Bismuth subnitrate.. 30 grs.
Cold cream ..... 4 drs. M.

THE EPITAPH OF YALE'S FOUNDER —It is not generally known that Elihu Yale, the founder of Yale University, lies buried in the churchyard at Wrexham, North Wales, about ten miles from Hawarden. The following lines are inscribed on his tomb in the front of the church door:

"Born in America, in Europe bred,
In Africa travelled and in Asia wed;
Where long he lived and thrived, in London dead,
Much good, some ill he did, so hope all's even,
And that his soul through mercy's gone to heaven."

These quaint lines had become almost effaced by the "tooth of time," when, a few years ago, a party of Yalensians visited the church and seeing the state of things, had the lettering recut. The church itself is a very old one, more than five centuries, it is said, and the curfew is rung from its bells every evening.

GOUT.—Dr. V. W. Gayle, of Kansas City, says, in *Langdale's Lancet*, that he has used the following formula for a number of years with considerable success:

℞ Tinct. stramonii..... ℥j.
Tinct. colchicum-seed, ℥iss.
Tinct. guaiacum..... ℥ij.

Sig.: Teaspoonful in milk three times a day.

As prophylactic measures in delirium tremens, moderate quantities of alcoholic stimulants, of digitalis and capsicum, nourishing food, and plenty of sleep are recommended by Dr. Horwitz.

EXTERNAL USE OF CHLORAL.—Dr. Brodnax (*Semaine Med.*, in *Med. and Surg. Reporter*) recommends the following formula for external use of chloral:

1. For pruritus, followed by urticaria, or any other eruption:

℞ Chloral,
Acid. carbol... āā 0 | 5 (gr. x.)
Ol. olivæ..... 50 | (℥ jss.)

2. For toothache:

℞ Chloral .....
Camphor .....
Acid. carbol ...
Glycerin ..... } āā 5.0 (℥ jss.)

A piece of cotton soaked in this solution is put on the aching tooth.

3. For earache:

℞ Chloral,
Camphor.,
Acid. carbol.... āā 0 | 5 (gr. x.)
Ol. ricini ..... 15 | 0 (℥ ss.)

Some drops of this solution are put into the ear; the solution must be warmed each time.

4. For acute coryza:

℞ Chloral ..... 0 | 5 (gr. x.)
Ol. ricini ..... 15 | 0 (℥ ss.)

After having cleansed the nasal cavities, wash them with this solution.

TO PREVENT PITTING IN SMALLPOX.—Dr. Theod. Faure claims excellent results from frequent applications to the face, neck, and hands of

℞ Iodoform..... ℥ ss.
Collodion ..... ℥ viiss.—M.
—*Le Progres Medical.*

PLENTY OF DOCTORS IN SOUTH AFRICA.—It is said that every small village in Cape Colony and Natal is well supplied with medical men (mostly of Scotch or German nationality), and in the larger towns the supply largely exceeds the demand.

THE following, applied at night and scraped off in the morning, is excellent for the reduction of corns:

℞ Salicylic acid..... ʒiss.
Ext. cannabis Indica gr. x.
Collodiam ..... ʒj. M.

MOST EXCELLENT RESULTS.—The *Scalpel* (London) says: "We have already referred to antikamnia in our February number, and from a more extended experience with it we are convinced of its efficacy as a sedative and anti-neuralgic. We have employed it for laryngeal cough, for avarian neuralgia, and as a sedative in alcoholism. We employed the tablets, five grains for a dose, repeating each half-hour or twenty minutes until the doses were taken, with most excellent results in each case. The powder is not readily soluble in water, though it may be dissolved and given in a little brandy and water, but the tablet is most convenient as it is readily swallowed, and the dose is measured. We have not had any experience with antikamnia as an antipyretic, though it is strongly recommended by some competent observers in feverish states, and it is said it is much safer than antipyrine—as it has no action on the heart."

DISQUALIFIED FOR APPOINTMENT TO MAKE EXAMINATION.—If, in any case, a litigant, suing for the recovery of damages for alleged injuries to his person caused by the negligence or the wrong of the defendant in the suit, can be, upon motion of the defendant, compelled to submit to an examination by a surgeon, the Court of Civil Appeals of Texas holds, Houston and Texas Central Railway Company v. Berling, November 12, 1896, that such surgeon should be one agreed on by the parties or selected by the Court and not one who has already testified in the case adversely to the plaintiff.

DR. GIUSEPPE SANARELLI.—The alleged discoverer of yellow-fever bacillus and of a curative antitoxin of the disease, is a graduate of Siena in 1889. He early turned his attention to the study of water-born diseases. He studied for a time at the Pasteur Institute in Paris and on his return to Italy was appointed professor of hygiene at the University of Siena. Upon the establishment of the Institute of Experimental Hygiene in Montevideo he was chosen as director at a salary of $5,000. While in Brazil he contracted yellow fever, and after his recovery declared war on the disease and set about the discovery of its cause. We earnestly hope he has been successful as announced, but we cannot forget that Freire and others have thought that they had discovered the secret and have been shown to be mistaken.

WHEN the secretion has become abundant and especially annoying in coryza, the following powder, used as a snuff, may afford relief:

℞ Morphinæ hydrochlor gr. ij.
Bismuthi subnitratis.. ℥ij.
Pulveris acaciæ..... ℥iss. M.
—*J. C. Wilson.*

TREATMENT OF THE INSANE BY REPOSE IN BED.—It has been found in St. Petersburg that insane patients are very favorably affected by being kept in bed, and the system has been introduced on a large scale for noisy, excitable patients and cases with psychic depression and general debility. Neither force nor narcotics are used, but the patients are merely habituated to remain in bed, although they take their walks and physical exercise every day as usual. It is not necessary to keep them in separate apartments and the economy of space and trouble to the attendants renders the practice a great convenience.—*Presse Méd.*

WAIVER OF PRIVILEGE AS PART OF CONTRACT.—Where the statutory law in force at the time a contract of insurance is entered into permits the insured to waive the benefit of the provisions of law preventing any physician from disclosing any information acquired in attending patients, and such a waiver is incorporated in the contract of insurance, the Court of Appeals of New York holds, in the case of Foley v. Royal Arcanum, December 15, 1896 that a subsequent amendment of the law allowing waiver only when made upon the trial does not affect the waiver already made as stated, because the Legislature can not pass an Act impairing the obligation of contracts, and such a waiver is not in and of itself contrary to public policy.

FOR EPITHELIOMATA OF SLIGHT EXTENT—

℞ Resorcin..... ʒss.
Pot. chlor ..... ʒijss.
Aquæ. dest ..... ℥x.

M. Sig.: Apply frequently as a wash.—*Brocq.*

GRANULATED LIDS.—Dr. Neznamoff's custom in treating granulated lids is to paint the mucous membrane of the lids with a solution of pure iodine mixed with liquid vaseline (oleum petrolei) twice a day. In chronic cases he uses vaseline containing from ½ to 1 per cent. of iodine. In about four days improvement begins, and in about twenty a cure is generally effected.—*Medical Times and Hospital Gazette.*

FILLING OF CHILD'S TEETH NOT URGENT NECESSITY.—While extracting of a tooth in relief of a toothache may be reasonably within the agency of a person with whom a child is temporarily residing apart from its parents to require, and thus obligate the father to pay for, the appellate term of the Supreme Court of New York holds, in Ketchem v. Marsland, November 25, 1896, that such agency does not extend to the employment of a dentist to fill and regulate the position of such a child's teeth, it not being deemed such an urgent necessity as to warrant such a course. However, the court holds the father liable in this case because of his ratification of what was done by not communicating any dissent to the dentist during three years that elapsed after he sent in his bill.

FOR TOOTHACHE—

℞ Camphor vas.,
Chloral hydrat.....āā gr. lxxv.
Cocaini hydrochlor.. gr. xv.
M. Sig.: To be introduced into the tooth cavity.

℞ Cocaini hydrochlor... gr. xv.
Opii ..... gr. lx.
Menthol..... gr. xv.
Altheæ pulv..... gr. xlv.
M. Div. in pellets weighing one-half grain each. Sig.: Place a pellet in cavity of the aching tooth.

℞ Lini aconiti....(B.P.)
Chloroformi .....āā ℥iij.
Tr. capsici..... ℥j.
Tr. pyrethri,
Ol. caryophylli,
Pulv. camphoræ ...āā ℥ss.
M. Sig.: A few drops on cotton to be placed in the cavity.

RESTLESSNESS.—Dr. Wells has found the following prescription of great use in quieting the restlessness so often seen in infants affected with subacute or chronic gastro-intestinal catarrh:

℞ Sulphonal ..... gr. ss.
Sodium bromid ..... gr. ii.
Spirit of peppermint .. gtt. x.
Camphor-water ..... ℥j.—M.

The dose should be repeated every two or three hours, according to indications. Occasionally, when the attack of restlessness is preceded by sour vomiting and pain, 5 or 10 grains of sodium bicarbonate added to the above prescription will increase its usefulness.—*Philadelphia Polyclinic.*

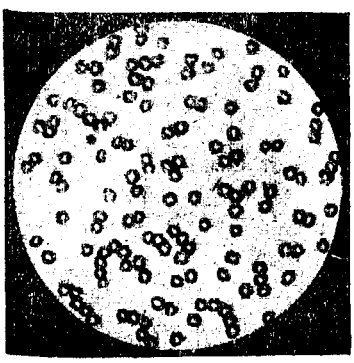
THE CROWNING DEVELOPMENT OF PRACTICAL MEDICINE

IN HÆMATHERAPY, OR BLOOD TREATMENT.

BLOOD, AND BLOOD ALONE, is physiologically ascertained to be the essential and fundamental Principle of Healing, of Defense, and of Repair, in the human system; and this Principle is now proved, by constant clinical experience, to be practically available to the system in all cases, to any extent, and wherever needed, internally or externally.

And the same overwhelming clinical demonstrations have also proved that the Vitality and Power of Bovine Blood can be and are *PRESERVED*, unimpaired, in a portable and durable preparation, sold by all druggists, and known as Bovinine. Microscopic examination of a film of Bovinine will show the LIVING BLOOD CORPUSCLES filling the field, in all their integrity, fullness, and energy; ready for direct transfusion into the system by any and every mode of access known to medical and surgical practice; alimentary, rectal, hypodermical, or topical.

A FILM OF BOVININE:
Showing the Blood-corpuscles Intact.



Micro-photographed
by Prof. R. R. Andrews, M.D.

In short, it is now an established fact, that if Nature fails to *make* good blood, *we can introduce it*. Nothing of disease, so far, has seemed to stand before it.

Apart from private considerations, these facts are too momentous to mankind, and now too well established, to allow any further reserve or hesitation in asserting them to the fullest extent.

We have already duly waited, for three years; allowing professional experimentation to go on, far and near, through the disinterested enthusiasm which the subject had awakened in a number of able physicians and surgeons, and these daily reinforced by others, through correspondence, and by comparison and accumulation of their experiences in a single medical medium adopted for that provisional purpose.

It is now laid upon the conscience of every physician, surgeon, and medical instructor, to ascertain for himself whether these things are so; and if so, to develope, practise and propagate the great medical evangel, without reserve. They may use our Bovinine for their investigations, if they cannot do better, and we will cheerfully afford every assistance, through samples, together with a profusion of authentic clinical precedents, given in detail, for their instruction in the philosophy, methods and technique of the New Treatment of all kinds of disease by Bovine Blood, so far as now or hereafter developed.

☞Among the formidable diseases overcome by the Blood Treatment, in cases hitherto desperate of cure, may be mentioned: Advanced Consumption; Typhoid Fever; Pernicious Anæmia; Cholera Infantum, Inanition, etc.; Hæmorrhagic Collapse; Ulcers of many years standing, all kinds; Abscesses; Fistulas; Gangrene; Gonorrhœa, etc.; Blood-poisoning; Crushed or Decayed Bones; Mangled Flesh, and great Burns, with Skin-propagation from 'points' of skin; etc., etc.

N. B. Bovinine is not intended to be, and cannot be made, an article of popular self-prescription. As it is not a stimulant, its extended employment in the past has been, and the universal employment to which it is destined will be, dependent altogether on the express authority of attending physicians. Address

THE BOVININE COMPANY, 495 WEST BROADWAY, NEW YORK.

ANALGESIA OF THE ULNAR NERVE IN CASES OF INSANITY.—Dr. O. Snell has corroborated the statement made by Cramer, that the "funny bone" sensation, *i.e.*, the unpleasant feeling produced by pressure on the ulnar nerve in the sulcus ulnaris, is much more frequently absent in general paralytics than in other cases of insanity. He found the phenomenon absent in fourteen out of twenty-five general paralytics, or in fifty-six per cent., while it was not found present in but eleven out of seventy-five cases of other forms of insanity. It was impossible to demonstrate a connection between the sensory disturbances of the surface of the skin innervated by the ulnar nerve and the other symptoms of general paralysis.—*Alienist and Neurologist.*

DIARRHŒA.—Dr. T. G. Stephens, of Sydney, Iowa, says in the *Medical World* that for an extemporaneous prescription the following is his favorite:

℞ Tinct. opii ..... ℥ ij.
Syr. rhei arom ..... ℥ iv.
Tinct. catechu ..... ℥ iv.
Sulphocarbolate of zinc, ℈ ij.
Oil of sassafras ..... ♏ lxxx.
Tr. lavender comp., q.s. ad ℥ xvj.

M. Sig.: One or two drachms after each stool.

COCAINE poisoning is best treated by the recumbent position, amyl nitrate, and aromatic spirits of ammonia in water slowly sipped.

CHLOROFORMED BROMOFORM.—The alcohol solution of bromoform mixes readily with water if chloroform is added to it as follows: Bromoform, 1.20; chloroform, 0.80; rum, q.s. to make 120 c.c. One teaspoonful contains 0.05 bromoform and 0.33 chloroform.—*Jour. de Méd. de Paris*, January 3.

VALUES A LABORER'S LEG AT $15,000.—The Appellate Division of the Supreme Court of New York holds, in Tully v. New York and Texas Steamship Company, December 1st, 1896, that $25,000 is too much to allow for the loss of a leg to a person twenty-eight years of age, presumably in good health and strong, but who had no established business, and earned about $12.00 a week at such employment as he could obtain; yet it holds that $15,000 would not be out of the way.

FOR LARGE ACNE POSTULES—

Ichthyol	1 part.
Bismuth subnitrate	1 part.
White precipitate	1 part.
Vaseline	10 parts.

Apply at night.—*Von Hebra and Ullman.*

FOR VAGINISMUS—

℞ Strontii bromid.,
Potass. bromid.,
Ammon. bromid.. āā ʒ i¼.
Aq. destill..... ʒ viij.

M. Sig.: Tablespoonful twice a day,

Or,

℞ Zinci. valerianat..... gr. ⅚.
Quinin, valerianat... gr. jss.
Extr. opii,
Extr. belladonn...āā gr. ½.

M. ft. pil. No. j. Sig.: From three to six pills daily.

Locally,

℞ Ext. krameriæ..... gr. iss.
Morphin. hydrochlor.. gr. ⅓.
Ol. theobrom ..... ʒ j.
Ft. suppos. vaginal.

Or,

℞ Cocain. hydrochlor... gr. iij.
Ext. belladonn..... gr. ijs.
Strontii bromid..... gr. iv.
Ol. theobrom ..... ʒ ij.
M. ft. suppositor. vaginal.

—*Touvenaint, in New Yorker Med. Monatsschrift.*

FOR CHAPPED HANDS AND FACE AND SORE NIPPLES.

℞ Compound tincture of benzoin ..... 10 mm.
Alcohol ..... ʒ ij.
Aquæ rosæ ..... 30 mm.
Glycerine ..... ʒ j.

M. Apply to chapped surfaces at night, after washing with soap and water and carefully drying.