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Original Contributions.

VACCINATION.*

BY P. H. BRYCE, M.D. TORONTO.

THE Vaccination Act demands that a child shall, within three months of birth, be taken to the medical practitioner for the purpose of being vaccinated, and the practitioner is required to vaccinate the child. Upon the eighth day following the vaccination, the child shall again be taken to the practitioner by whom the operation was performed, in order that he may by inspection ascertain the result of the operation. If successful upon inspection, the practitioner shall give a certificate to that effect.

Fortunately in this matter modern science has developed nothing leading us to the belief that the law of thirty years ago calls for a practice no longer tenable. Bovine vaccine and glycerinized lymph are capable of producing the old typical, clinical phenomena caused by the use of humanized lymph, and we have a right to claim the following as representing our beliefs in the matter of vaccination and the part it plays as a prophylactic against small-pox until confirmatory evidence to the contrary has been brought.

It is hardly necessary to say that the whole value of vaccination depends upon its ability to protect either against infection with small-pox or to modify the virulence of an attack, should it occur. That such results have followed vaccination, the history of a hundred years has proved. These two points in the experi-

*Abstract from quarterly Report, Ontario Provincial Board of Health, April 26th, 1901.

ence of twenty years having been absolutely demonstrated in hundreds of outbreaks and thousands of cases, the question to be determined is: Upon what factors in vaccination do such satisfactory results depend? Briefly, these are:

1. A normal vaccine, that is, one where the assumed microbe of the disease is actively present.
2. The use of a vaccine when fresh and active.
3. The absence of extraneous microbes in the vaccine.
4. The careful inoculation of patients and subsequent treatment of the wound.

The question arises at once, What is normal vaccine? In my experience it is a lymph which produces a history of evolution of the vesicle exactly as set forth by Professor T. A. Ackland, one of the officers of the English Royal Commission (1889-1896) to enquire into alleged injuries due to abnormal vaccinations, and which is found in "Allbutt's System of Medicine," Vol. 2. Its stages are: (1) scarification and immediate inflammatory reaction, subsiding within a few hours; (2) on the third or fourth day, pale red papules appearing, which during the next five days develop into compound vesicles, becoming pustules on the ninth day; (3) vesicles distended with lymph and plump at first, but as the lymph thickens, the centre becomes depressed, forming a scab and surrounded with a distinctly raised marbled border; (4) an area of redness and inflammatory thickening of tissue around the pustule of an inch or more in diameter; (5) a decrease from tenth day of the inflammatory area and a drying of the scab which falls by the twentieth day; (6) a cicatrix usually with a hard scar centre with rays more or less distinct.

The same article gives a table showing variations in the development of the pock, most of which it states are, however, slight, such as abnormal rapidity or delay in the evolution of the vesicle. In the same work, in another monograph by Dr. M. Copeman, dealing more especially with the morphology, chemistry and preparation of vaccine, he there points out how bovine lymph has in England taken the place of humanized, and then proceeds to speak of glycerinized lymph. He speaks of the practically constant presence of extraneous microbes in lymph, and notes his experiments as early as 1891, which proved that a 50 per cent. solution in water of chemically pure glycerine to one part of vaccine pulp, set aside from light for a few weeks, removes all saprophytes as well as tubercle bacillus and streptococcus. Thereafter follows the satisfactory statement that in vaccine thus properly produced "we have then a preparation which, while even more efficient as vaccine than the original lymph, can be produced entirely free from extraneous organisms," and he points out how scientific workers in France, Germany, England, and America have borne

out these statements. Referring to the operation on the calf, Copeman points out that on the fourth day the pustule is mature, and that the lymph is then taken and treated, thereby showing that with glycerinized lymph the evolution of the vesicle is the same as with the lymph unglycerinized. It may be further remarked that in the experimental work of Chambon and Beclere, of the Animal Vaccine Institute of Paris, the history of normal vaccination is the same as that given above. The immunity of bovines and of children and of monkeys thus vaccinated to revaccination is not only relative, but for several years practically absolute. Of the protective qualities of vaccination against exposure to small-pox in the persons of physicians and nurses, it is unnecessary to dilate, as we have personal knowledge of the facts in the case of hundreds during the past twenty years, as well as the protection up to the fourth day by immediate vaccination of exposed persons. Copeman gives many illustrative examples of the same fact. That in a whole series of cases with relatively inert vaccine such immunity does not exist against even mild small-pox has been brought to our knowledge in different outbreaks within the last few years, and further, that persons with no cicatrices from a previous vaccination, have within periods from a month to a year thereafter, been revaccinated with perfect success.

Copeman, speaking of the necessity for efficient vaccination, points out in a study of recent statistics compared with those of former years, "that we are taught a variety of lessons of which the most important is that while infant vaccination affords an almost absolute immunity from small-pox up to ten years, to do so it must be efficient." Absolute immunity, he further states, is practically obtained with a revaccination after ten years. He points out that the more closely the vaccination of patients in recent epidemics has been studied, the more obvious has it become that a deplorably large proportion of the nominally vaccinated have been most inefficiently vaccinated, and are consequently almost unprotected against small-pox, and says: "So long as medical men, in their mistaken good nature, are found ready to yield to the ignorance or vanity of applicants for vaccination, and to make only one, or perhaps two, insignificant insertions of lymph in a child's arm, and to certify cases of that kind as successfully vaccinated, so long shall we have to struggle against the fallacies and sophistries of anti-vaccinationists." Asking further how efficient vaccination is to be secured, he states: "That the Local Government Board prescribe that public vaccination shall in all ordinary primary cases produce at least four goodsized separate vesicles not less than half an inch in diameter. The total should not be less than half a square inch.

In a statistical study by Dr. Thorne Thorne, of 13,775 cases in the London Small-pox Hospital, in two series, the following result for the second series from 1852 to 1867, or in 10,661 cases, is given:

Stated to have been vaccinated—	Percentage of Deaths.
With no cicatrix	39.4
" one "	13.8
" two "	7.7
" three "	3.0
" four "	0.9

He further points out that of 13,775 admitted, vaccination was very defective in 11,172, of whom 1,072 died. Of 1,079 reasonably good, 21 died; and of 1,505 with good normal marks, only 13 died. Such statistics can be duplicated from many sources.

In conclusion it may be stated that we have yet to learn of any facts which can alter the biological, clinical, and statistical evidence upon which the Royal Commission of England, after seven years of investigations, based its conclusions, which are essentially those set forth in the preceding references, and which in every detail, whether biological, clinical or statistical, are supported by our own experience.

The urgency of the situation demands that this Board make public its views on the subject which the public have been ignorant or careless of, and that it impress its views in the most positive manner upon local health authorities in all parts of the Province.

DIPHTHERIA OF THE CONJUNCTIVA.*

BY JAMES MacCALLUM, M.D.,
Oculist and Aurist to Victoria Hospital for Sick Children and to St. Michael's Hospital.

PRIMARY diphtheritic conjunctivitis is very rare in America. Less rare, yet very infrequent, is diphtheria with conjunctival complication. In thirteen years of private practice and hospital connection I have seen in Toronto but one case, though Dr. R. J. Wilson and Dr. Tweedy have given me brief notes of four others. As to the proportion of cases in which the eye is affected, the text-books are strangely silent. Dr. Tweedy has records of 3,477 cases seen by him in the Toronto Isolation Hospital from 1891 to 1900. In but two of these was the conjunctiva attacked. This, I believe, is, for Toronto, overstating rather than understating its frequency.

CASE 1. Frank S., aged 18 months, admitted May 3rd, 1900. The previous history unknown. Two weeks ago he was brought to the outdoor clinic with a sore on penis and edema of prepuce. Has had catarrhal discharge from nose for some weeks. During the last few days the eye has become very sore. Corneal cicatrices. Edema and redness of lids of right eye. On palpebral surface of right lower lid there is a greyish-white membrane sharply defined covering nearly the whole surface. Eczema of the ears and face, excoriations of alæ nasi and upper lip.

The child, a foundling brought to the Children's Shelter, had well-marked marasmus. The ulcer on the penis was found covered with a greyish membrane. Cultures from it and from the eye both showed the Klebs-Lœffler bacillus. The membrane on the conjunctiva gradually disappeared in the course of three days without any involvement of the cornea. The treatment consisted of antitoxin, iron and alcohol internally, and bichloride solution 1 in 5,000 locally. The day after the membrane had completely disappeared from the conjunctiva the child suddenly died. The membrane disappeared by becoming gradually thinner and thinner, not by a portion loosening and being cast off.

CASE 2. By Dr. R. J. Wilson. J. P., aged 12, male. Had pharyngeal diphtheria. Within two days membrane had spread through naso-pharynx into nares and appeared on upper lip, passed through the Eustachian tubes and filled the external auditory meatus on each side, covered the glans penis, and appeared around the anus, spreading on to each buttock. On the third day the bulbar and palpebral conjunctivas were covered with membrane. The eyes presented the appearance of gonorrheal ophthalmia, except that there was no purulent secretion. On the fourth day the boy died.

*A paper read at the Canadian Medical Association at Ottawa, September, 1900.

CASE 3. By Dr. R. J. Wilson. Infant, aged 2. Pharyngeal diphtheria. Third day both palpebral and bulbar conjunctiva covered by membrane. Fifth day, death.

In neither of these cases did the patient live long enough to allow of the cornea being destroyed. These cases were all in ante-antitoxin days.

CASE 4. By Dr. Tweedy. Corrine B., aged 4½, admitted August 20th, 1900. Cellulitis and adenitis quite prominent when admitted, also local infection of an extensive nature on external genitals, involving skin and mucous membrane and extending round beyond the anus and inside of the thighs. The membrane on the mucous membrane in this vicinity was continuous, that on the skin isolated patches, many of them circular, with area of hyperemia surrounding some of them. There were three attacks of epistaxis. Before death purpuric spots appeared on the skin. There was a small area of membrane on the conjunctiva of the internal angle of either eye. Child died suddenly, August 23rd.

CASE 5. By Dr. Tweedy. Eva B., aged 14, admitted August 22nd, 1900. Naso-pharyngeal diphtheria. Obstruction in breathing due to inflammatory action. Adenitis and cellulitis marked. A week after admission erysipelas appeared in face, extending up to eyes, completely closing them. The conjunctiva in part became infected with diphtheria, and this in turn affected the bulbar conjunctiva to a limited extent. There was very great peripheral sensibility of body, and patient was in highly nervous condition, calling and screaming out on very slight provocation. This continued for several days, when death took place, September 4th.

The accepted idea seems to be that the membrane spreads directly up through the nasal duct into the conjunctival sac.

Extension by way of the nasal duct into the conjunctival sac, however plausible an explanation, is shown by clinical experience to be most infrequent. Much more likely is the conjunctiva to be infected by the fingers or by rags soiled with discharge from the nose or mouth. Every care should be taken to prevent the child by any chance rubbing his eyes with the rags used for this purpose. The danger, however slight as a matter of statistics, is yet too real to permit one to neglect this precaution. It is like death from an anesthetic; it may occur but once in ten thousand cases, yet one never knows when his case may be *that one*. The association of conjunctival and genital diphtheria argues infection from the fingers.

In what proportion of cases the conjunctival diphtheria is primary, and the pharyngeal secondary, is a point not elucidated by any authority I have access to, although Berry states that to be the general order of appearance. In none of these cases was this the order of events.

Conjunctival diphtheria seems less contagious, perhaps, than other forms. Cases 4 and 5 were sisters, and so one may have

infected the other, but in the other cases there is no history of any other child in the ward or in the family having contracted the disease. Nevertheless, isolation is necessary. It can be easily understood that a child with any form of conjunctivitis coming in contact with diphtheria or contracting it, would be very prone to develop conjunctival diphtheria. This again leads to the question whether children with sore eyes during a diphtheria epidemic may not really have a masked diphtheritic conjunctivitis without membrane, and be a means of carrying the disease to others in whom the membrane shall develop. It is often so difficult to trace diphtheria to its source that this possibility should be kept in mind. We may have a diphtheritic sore throat with specific bacilli but no membrane. Why not a conjunctivitis of the same kind?

In treatment the one thing to be relied upon is antitoxin in large doses, together with antiseptic solutions and supporting internal treatment. If the disease be limited to the eye, the visual result depends on whether the cornea be attacked or not. The unaffected eye should be protected by a shield or an occlusion bandage.

All of these cases ended in death. There is no reason why a diphtheria originating in the conjunctiva, and limited to the eye, should prove fatal, any more than does a gonorrheal ophthalmia or a panophthalmitis, but when secondary to diphtheria in other parts of the body, the case is quite otherwise. Ophthalmological authorities seem to regard with complacency, as regards a fatal result, diphtheria of the eye, their experience being derived chiefly from pure conjunctival cases. Swanzy, who, under Von Graefe, had charge in the Berlin Hospital of two wards set apart for diphtheria of the conjunctiva, makes no mention of any fatal result, and distinctly states that it "is rarely, if ever, found in connection with an attack of diphtheritis of the fauces."

13 Bloor Street West.

DIAGNOSIS AND SYMPTOMATOLOGY IN THE APPENDICITIS OF CHILDREN.*

BY THOMAS H. MANLEY, M.D., NEW YORK.

In no branch of surgery has so much attention been bestowed during the past ten years, as that which deals with lesions of the appendix-vermiformis, their pathology and treatment.

It is self-evident to anyone, that it is absurd to discuss the pathology of a structure, the physiology or function of which is yet quite unknown, if, indeed, it has any, any more than the terminal appendix of the spinal column has any, other than that of a rudimentary tail.

The Interpretation of Symptoms and Diagnosis.

The practitioner, therefore, has to deal rather, here, with facts than philosophical speculations. He can learn but little more on the problem of operative technique, as that cannot be much further simplified or improved; but what is often more difficult to master than surgical technique, is the art of correctly interpreting symptoms and accomplishing correct diagnosis in those typhlitic cases There is much yet to be learned.

That the symptomatology of appendicitis has been exceedingly vague, we may gather from the fact that it was as late as 1827 when we had the first accurate description of the morbid anatomy of appendicitis by Menier.

More adequate descriptions bearing on symptoms later appeared from the pens of Dance and Albus, but sixty years passed before these investigations bore fruit, and Sands, of New York, for the first time on record, diagnosed perforative-appendicitis in a boy of 12, removed the organ by surgical operation, and saved the patient.

In 1887 Weir was able to collect but fifteen cases in which laparotomy had been performed for supposed perforated intestine. The appendix was the seat of perforation in four of these, although this was not discovered until after death.

Sexual Frequency and Relative Age.

About the same sexual differences in frequency obtain at all ages. It occurs most frequently in early adult life, but may be

*Abstract of an essay read at the meeting of the American Medical Association, Atlantic City, N.J., June 5, 1900.

encountered at any age. Jalaquier records 182 cases at an early age in his own practice; 4 were under five years, 42 from 5 to 6, 64 from 10 to 15 years, 25 from 15 to 20. There were 112 males to 70 females.

Other tables, as Bamberger's, Matherstock's, Gordon's and Burri's show about the same relative frequency in early life.

The population of New York City proper is about 2,000,000. In 1899 there were 299 deaths from appendicitis; 58, or about one-fifth in children; not such a startling mortality.

Diagnostic Features in the Child.

The causative factors in the child, as with the adult, remain exceedingly obscure. But, when we come to diagnosis and symptomatology, we draw a wide line between these two stages of life.

We must remember that the child is yet in his evolutionary stages of development, we have not yet the difficult sexual distinctions, nor the organic complications peculiar to advancing years. The organs are not immature, the intestinal canal in its various segments bears different relations to those found in the adult; the cecum may have not yet descended, or is not definitely fixed; the child's pelvis is shallow, and the bladder is much more uncovered by peritoneum than the adult's; hence, why paresis of the bladder and painful evacuation of it is much earlier and more constant sign of appendicitis in the child, than later in life.

In consequence of the absence of abdominal fat the cecum lies more superficial, and is more easily palpated; but as Dr. Joseph H. Byrne, of New York, has demonstrated, concretions in it may be appreciated with the index finger and thumb, and be safely expressed outward into the cavity of the bowel, in cases of appendicular colic.

Complications, Etc.

It is, therefore, obvious that appendicitis is usually less difficult of detection in the child than after full growth. Complications, it goes without saying, are less frequent, though they are in evidence only too often; as tuberculosis, dysenteric ulceration, intussusception, worms, enteritis, malaria, displaced kidney, cecal coprostasis, internal hernial strangulation, subphrenic, supernephric or psoas abscess.

Pharmacology and Therapeutics.

IN CHARGE OF
A. J. HARRINGTON, M.D., M.R.C.S.(Eng.)

FINAL REPORT OF THE CANADIAN COMMITTEE ON THE PROPOSED CANADIAN ADDENDUM TO THE BRITISH PHARMACOPEIA.

In presenting on behalf of the Canadian Medical Association the following report and recommendations as to materials and preparations which should be embodied in the Addendum to the British Pharmacopeia, it is unnecessary that we should again detail the history of that Addendum, this having already been brought to the notice of those specially interested, both by Professor Attfield's circular letter and draft report and in the draft report of the Committee appointed in Montreal, and again in the draft report already circulated by this Committee and printed in the *Canadian Pharmaceutical Journal*, October, 1899.

This final draft report was forwarded to Professor Attfield upon November 17th, 1899, and was discussed on Monday, December 4th, by the Committee charged by the General Medical Council with the drafting of the projected Indian and Colonial Addendum.

From Dr. Attfield, upon December 30th, was received a report embodying the views of the latter Committee. By that body 12 out of 29 articles included in the Canadian Draft Report were at once provisionally accepted; with regard to the rest it was pointed out that several of them should more properly be included not in a special Colonial Addendum, but in the "Additions" to the British Pharmacopeia, which will be printed within the next two years.

Upon consideration of Professor Attfield's very long and full letter, the Canadian Committee, without wishing to force the hands of the central body in London, had determined in this definitive report to arrange its recommendations in three classes, viz.:

1. The articles mentioned in Dr. Attfield's list as already provisionally accepted.

2. Drugs and preparations reaffirmed, if we may so express it, by us for inclusion in Class 1.

3. Those preparations which the Canadian Committee concurs in agreeing, should be considered for inclusion in the next "Additions" of the British Pharmacopeia.

The articles in Class 2 are regarded for Canadian purposes as being in no way behind those in Class 1, either in the matter of being in frequent demand, or in the matter of pharmaceutical value.

We repeat, however, that in making these recommendations, it is not our wish to indicate to the Central Committee in London, that we are not wholly content to leave the decision of these matters in the hands of that body, or that individually or as a whole, the members of the Canadian Committee seriously disagree with the suggested action of that body. Throughout, the desire of this Committee has been to be of use both to Canada and to the authorities in England, and if few or many of the articles in Class 2 gain entrance into the proposed Addendum, we are glad to think that our labors will not have been in vain.

[Signed]

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SECTION I.

Drugs and Preparations accepted for inclusion in the Canadian Addendum to British Pharmacopeia.

1. Arnicæ Flores.

The Flowers of Arnica Montana.
Used in preparation of Tinctura Arnicæ Florum.

2. Tinctura Arnicæ Florum.

(*Tincture of Arnica Flowers.*)

	Imperial	metric
Arnica Flowers (in No. 20 powder)	2 ozs.	100 grammes
Alcohol (45 per cent.)	A sufficient quantity.	

Moisten the powder with four fluid ounces (or two hundred cubic centimetres) of the alcohol, and complete the percolation process. The resulting tincture should measure one pint (or one thousand cubic centimetres).

Dose.—½ to 1 fluid drachm.

Note.—This tincture is the preparation exclusively used in this country.

3. Turpethum.

(*Turpeth Root.*)

The root of Ipomea Turpethum.
Used in Tinctura Jalapæ Composita.

4. Tinctura Jalapæ Composita.

(*Compound Tincture of Jalap.*)

	Imperial	metric
Jalap (No. 40 powder)	1 oz., 262 grains	80 grammes
Scammony "	175 grains	20 "
Turbeth	88 "	10 "
Alcohol (60 per cent.)	A sufficient quantity.	

Moisten the powder with two fluid ounces (or one hundred cubic centimetres) of the alcohol, and complete the percolation process. The resulting tincture should measure one pint (or one thousand cubic centimetres).

Note.—The ordinary tincture is never called for in Canada, while in the French-speaking Province of Quebec this preparation borrowed from the Codex, is in very frequent demand and is found by the medical profession to be active and reliable.

5. Grindelia.

The leaves and flowering tops of Grindelia robusta and G. squarrosa.

Used in Extractum Grindeliæ Liquidum.

6. Extractum Grindeliæ Liquidum.

(*Liquid Extract of Grindelia.*)

	Imperial	metric
Grindelia (in No. 40 powder)	20 ozs	1000 grammes
Sodium Bicarbonate	2 "	100 "
Water	10 fluid ozs	500 cubic centi-
Alcohol (90 per cent.)	A sufficient quantity.	[metres

Moisten the Grindelia with eight fluid ounces (or 400 cubic centimetres) of the Alcohol; macerate in a closed vessel for twenty-four hours; pack the moistened powder in a percolator, and add sufficient of the alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for twenty-four hours, then allow percolation to proceed, gradually adding the Alcohol until the Grindelia is exhausted. Recover the Alcohol by distillation, and dissolve the residue in the water containing the Sodium Bicarbonate, and after effervescence ceases add sufficient of the Alcohol to make twenty fluid ounces (or one thousand cubic centimetres) of Liquid Extract.

Dose.—10 to 20 minims.

7. Triticum.

(*Couch Grass.*)

The rhizome of Agropyrum repens.

Used in Extractum Tritici Liquidum.

8. Extractum Tritici Liquidum.

(*Liquid Extract of Couch Grass.*)

	Imperial	metric
Couch grass (cut small)	20 ozs	1000 grammes
Alcohol (90 per cent.)	5 fluid ozs	250 cubic centi-
Boiling Water	A sufficient quantity.	[metres

Digest the Couch Grass with one hundred fluid ounces (or five litres) of Boiling Water for six hours; strain; repeat the operation twice; mix the infusions and evaporate to fifteen fluid ounces (or eight hundred cubic centimetres); add the alcohol; let stand

twenty-four hours and filter. The finished product to be twenty fluid ounces.

Dose.—1 to 2 drachms.

NOTE.—Very often used. All the principles are in solution.

9. VIBURNUM.

(Black Haw.)

The bark of Viburnum Prunifolium, *Linn.*
Used in Extractum Viburni Liquidum.

10. EXTRACTUM VIBURNI PRUNIFOLII LIQUIDUM.

(Liquid Extract of Black Haw.)

	Imperial	metric
Black Haw (in No. 60 powder)	20 ozs	1000 grammes
Alcohol (70 per cent.)	A sufficient quantity.	

Moisten the powdered black haw leaves with about eight fluid ounces (or 400 cubic centimetres) of the alcohol; pack the moistened powder in a percolator, and add sufficient of the alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding the alcohol until the Black Haw leaves are exhausted; reserve the first seventeen fluid ounces (or 850 cubic centimetres) of the percolate; remove the alcohol from the remainder by distillation; evaporate residue to a soft extract; dissolve this in the reserved portion; add sufficient of the alcohol to produce twenty fluid ounces (or one thousand cubic centimetres) of the Liquid Extract.

Dose.—1 to 2 drachms.

NOTE.—Valuable and much in use.

11. OLEUM GAULTHERIÆ.

(Oil of Wintergreen.)

Distilled from the leaves of Gaultheria Procumbens or from the bark of Betula Lenta.

Characters and Tests.—Colorless or slightly yellowish tint. Specific gravity 1.180 to 1.187. It should rotate the plane of a ray of polarized light not less than 0.25 degrees to the left in a tube 100 millimetres long (Powers & Kleber).

NOTE.—As an aromatic oil this in Canada is popular with the profession and the laity very much as is peppermint in Great Britain. Therapeutically as methyl salicylate, whether prepared

synthetically or derived from the above-mentioned source, it is of no small value and is frequently prescribed.

12. Syrupus Ferri Iodidi.

(Syrup of Ferrous Iodide.)

Note.—It is recommended that a note be appended to the description of the preparation of Syrupus Ferri Iodidi in future editions of the B. P. to the effect that the amount of sugar may be varied according to the contingencies of climate, so that crystallization be thus prevented.

SECTION II.

Drugs and Preparations which the Canadian Committee reaffirm for inclusion in the Addendum.

1. Elixir Aurantii Compositum.

(Elixir of Orange.)

	Imperial	metric
Tincture of Orange	2 fluid ozs	100 cubic centimetres
Tincture of Lemon	½ "	25 "
Orange Flower Water	2 "	100 "
Alcohol (90 per cent.)	3 "	150 "
Syrup	8 "	400 "
Water	Of each a sufficient quantity.	
Kaolin		

Mix the Tincture of Orange, Tincture of Lemon, Orange Flower Water, Alcohol, Syrup and four fluid ounces (or 200 cubic centimetres) of water with two ounces of the Kaolin; set aside for twenty-four hours; filter; wash the filter with sufficient water to make twenty fluid ounces (or one thousand cubic centimetres) of Simple Elixir.

Note.—In reference to the term "Elixir" this is preferred by the Committee to that of "Syrupus" in that the latter indicates something of a thick syrupy nature. There is a distinct lack of adjuvants of this nature in the B. P., and it is desired to have a thinner liquid than the Syrupus Aromaticus, 1898. No better term than Elixir suggests itself to the Committee, which term, it might be added, is employed in the U. S. P. in this connection, and is familiar to all pharmacists and medical men in America. If "Adjuvans" could be employed it would recommend itself.

2. Extractum Buchu Liquidum.

(Liquid Extract of Buchu.)

	Imperial	metric
Buchu Leaves (in No. 40 Powder)	20 ozs	1000 grammes
Alcohol (90 per cent.)	A sufficient quantity.	

Moisten the powdered Buchu Leaves with about eight fluid ounces (or 400 cubic centimetres) of the Alcohol; pack the moistened powder in a percolator, and add sufficient of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding the Alcohol until the Buchu Leaves are exhausted; reserve the first thirteen fluid ounces (or 850 cubic centimetres) of the percolate; remove the Alcohol from the remainder by distillation; evaporate the residue to a soft extract; dissolve this in the reserved portion; add sufficient Alcohol to produce twenty fluid ounces (or 1,000 cubic centimetres) of the Liquid Extract.

Note.—The Liquid Extract is commonly prescribed and dispensed, neither the Infusion nor the Tincture being used to any extent.

3. Extractum Pruni Virginianæ Liquidum.

(Liquid Extract of Wild Cherry.)

	Imperial	metric
Wild Cherry Bark (in No. 40 powder)	20 ozs	1000 grammes
Glycerin	2 fluid ozs	100 cubic cent.
Alcohol (45 per cent.)	A sufficient quantity.	

Mix the Glycerin with six fluid ounces (or 300 cubic centimetres) of the Alcohol; moisten the Wild Cherry Bark with the mixture, and allow to macerate in a tightly-closed vessel for forty-eight hours; pack the moistened powder in a percolator; add sufficient of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for twenty-four hours; then allow percolation to proceed, gradually adding the Alcohol until the Wild Cherry Bark is exhausted; reserve the first eighteen fluid ounces (or 900 cubic centimetres) of the percolate; remove the Alcohol from the remainder by distillation; evaporate the residue to a soft extract; dissolve this in the reserved portion; add sufficient of the Alcohol to produce twenty fluid ounces (or 1,000 cubic centimetres) of the Liquid Extract.

Dose.—30 to 60 minims.

Note.—A more concentrated preparation than the Tincture is desired, and the Liquid Extract is in great demand in Canada.

4. Extractum Senegæ Liquidum.

(Liquid Extract of Senega.)

	Imperial	metric
Senega (in No. 40 powder)	20 ozs	1000 grammes
Solution of Potash	1 fluid oz	50 cubic cent.
Alcohol (70 per cent.)	A sufficient quantity.	

Moisten the powdered Senega with the Solution of Potash and six ounces of the Alcohol; pack the moistened powder in a percolator, and add sufficient of the Alcohol to saturate it thoroughly; when the liquid begins to drop, close the lower orifice of the percolator; set aside for forty-eight hours; then allow percolation to proceed, gradually adding the Alcohol until the Senega Powder is exhausted; reserve the first seventeen fluid ounces (or 850 cubic centimetres) of the percolate; remove the Alcohol from the remainder by distillation; evaporate the residue to a soft extract; dissolve this in the reserved portion; add sufficient of the Alcohol to produce twenty fluid ounces (or 1,000 cubic centimetres) of the Liquid Extract.

Dose.—5 to 20 minims.

Note.—A more concentrated preparation than the tincture is desired, and the Liquid Extract is in great demand in Canada.

5. Syrupus Ipecacuanhæ.

(Syrup of Ipecacuanha.)

	Imperial	metric
Liquid Extract of Ipecacuanha	1 fluid oz	50 cubic cent.
Acetic Acid	96 minims	10 "
Glycerin	2 fluid ozs	100 "
Sugar	14 ozs	700 grammes
Water	A sufficient quantity.	
Kaolin	" "	

Mix the Liquid Extract of Ipecacuanha, Acetic Acid and ten fluid ounces (or 500 cubic centimetres) of water; filter through Kaolin into a vessel containing the Glycerin; add the sugar and dissolve without the aid of heat; strain and add the water to make twenty fluid ounces (or 1,000 cubic centimetres) of the Syrup.

Dose.—1 to 2 drachms.

Note.—Strongly recommended. Prepared as above it accords in strength with the wine.

6. Syrupus Senegæ.

(Syrup of Senega.)

	Imperial	metric
Liquid Extract of Senega	4 fluid ozs	200 cubic cent.
Sugar	14 ozs	700 grammes
Water	A sufficient quantity.	
Kaolin	" "	

Mix the Liquid Extract of Senega with ten fluid ounces (or 550 cubic centimetres) of water; filter through Kaolin, washing the filter with distilled water; dissolve the sugar in the filtrate; strain and add water to make twenty fluid ounces (or 1,000 cubic centimetres) of the Syrup.

Dose.—½ to 1 fluid drachm.

NOTE.—Preferred to Tincture. It is not thought advisable to recommend the use of the Concentrated Liquor, as this class of preparation has not proved popular in the country.

7. TINCTURA OPII DEODORATA.

(Deodorized Tincture of Opium.)

	Imperial	metric
Opium	3 ounces	150 grammes
Alcohol (90 per cent.)	Of each a sufficient quantity.	
Distilled Water		

Rub the opium to a paste with ten fluid ounces (or 500 cubic centimetres) of the distilled water, previously heated to at least 200 deg. F. (93.3 deg. C.), set aside for six hours, and strain through a calico filter. To the residue add another five ounces (or 250 cubic centimetres) of the water; mix thoroughly; set aside in a covered vessel for six hours; strain; press; mix the liquids, and allow to stand for twelve hours in a vessel surrounded by ice; filter through a pleated filter containing a piece of ice. Evaporate the liquid to 5 ounces (or 250 cubic centimetres) of the Alcohol. Set aside for twenty-four hours; filter. Determine the percentage of morphine in the liquid by the process given under Tincture of Opium; and to the filtered liquid add a sufficiency of a mixture of equal parts of alcohol and water, so that the resulting tincture will contain not less than 0.70 grammes, nor more than 0.80 grammes, in one hundred cubic centimetres.

Dose.—5 to 15 minims for repeated administration.

For a single administration 20 to 40 minims.

NOTE.—This is much needed; the process of deodorisation and preparation by this method does not weaken the opium, while a more elegant preparation is obtained which is useful, especially when it is desired to mask the drug. Very satisfactory, popular, and in demand all over Canada.

8. HYDRARGYRI IODIDUM FLAVUM.

(Yellow Mercurous Iodide.)

$Hg_2 I_2$

Mercurous Iodide obtained by interaction of mercurous nitrate and potassium iodide.

Characters and Tests.—A bright yellow amorphous powder, almost insoluble in water, entirely insoluble in alcohol and ether.

Treated with ten times its volume of Alcohol (90 per cent.); the latter filtered on evaporation should not yield more than a trace of red residue of Mercuric Oxide.

NOTE.—Made according to this formula it is stable when protected from the light, much more stable than the green iodide, while being of definite composition and definitely active; further, it is in much demand.

9. LIQUOR ALDEHYDI METHYLICI.

(Solution of Methylic Aldehyde.)

Synonym:—Formic Aldehyde.

A 40 per cent. Aqueous Solution of Methyl Aldehyde Gas produced by the oxidation of Methyl Alcohol, specific gravity from 1085 to 1090. A clear, colorless liquid, with a pungent and irritating odor, soluble in alcohol and water.

SECTION III.

For inclusion in next "Additions" to B. P.

1. EMULSUM OLEI MORRHUÆ.

(Emulsion of Cod Liver Oil.)

	Imperial	metric
Cod Liver Oil	8 fluid ozs	500 cubic cent.
Gum Acacia (in powder)	2 ozs	125 grammes
Syrup	1 fluid oz	62.5 cubic cent.
Oil of Bitter Almonds	2 min	0.3 "
Water	A sufficient quantity.	

Triturate the Cod Liver Oil and Gum Acacia together; add five fluid ounces (or 313 cubic centimetres) of water, and stir briskly; when the emulsion is formed add the Oil of Bitter Almonds, the Syrup, and sufficient water to make sixteen fluid ounces (or 1,000 cubic centimetres).

NOTE.—In response to the constant demand for an emulsion and as a useful basis for the administration of creosote, hypophosphites, etc. As this emulsion contains 50 per cent. of oil it cannot be kept for long periods, as can many proprietary emulsions containing a much smaller amount. By the described method it can be made up in large or small quantities in a very short time and made thus it preserves its characters for two weeks or more.

In place of Oil of Bitter Almonds, other flavorings may be introduced as desired.

2. Extractum Hyoscyami Liquidum.

(Liquid Extract of Henbane.)

	Imperial	metric
Henbane Leaves (in No. 40 powder)	20 ozs	1000 grammes
Alcohol (60 per cent.)	A sufficient quantity.	

Moisten the powdered Henbane Leaves with about eight fluid ounces (or 400 cubic centimetres) of the Alcohol; pack the moistened powder in a percolator, and add sufficient of the Alcohol to saturate it thoroughly; when the liquid begins to drop close the lower orifice of the percolator, set aside for forty-eight hours, then allow percolation to proceed, gradually adding the Alcohol until the Henbane Leaves are exhausted; reserve the first seventeen fluid ounces (or 850 cubic centimetres) of the percolate; remove the Alcohol from the remainder by distillation; evaporate the residue to a soft extract, dissolve this in the reserved portion and add sufficient of the Alcohol to produce twenty fluid ounces (or 1000 cubic centimetres) of the Liquid Extract.

Note.—More reliable than the Succus as obtained in Canada, and contains less alcohol than the Tincture.

3. Liquor Antiseptica Aromatica.

(Aromatic Antiseptic Solution.)

	Imperial	metric
Benzoic Acid	88 grains	10 grammes
Boric Acid	175 "	20 "
Borax	88 "	10 "
Thymol	18 "	2 "
Eucalyptol	10 minims	1.6 cubic cent.
Oil of Wintergreen	10 "	1.6 "
Oil of Peppermint	6 "	.96 "
Glycerin	2 fluid ozs.	100 "
Alcohol (90 per cent.)	6 "	300 "
Water	A sufficient quantity.	
Kaolin	" "	

Dissolve the Thymol, Oil of Wintergreen and Oil of Peppermint in the Alcohol; dissolve the Benzoic Acid, Boric Acid and Borax in twelve fluid ounces (or 600 cubic centimetres) of the water; add the Glycerin; mix the two solutions; set aside for twenty-four hours; filter through Kaolin, and add sufficient water to make twenty fluid ounces (or 1000 cubic centimetres).

Note.—Included because of the absence from the B. P. of any satisfactory preparation of the nature of a nose and mouth wash which is at the same time agreeable to use and antiseptic. For such there is so unmistakable a demand that it should be satisfied even at the cost of the charge of polypharmacy.

4. Syrupus Acidi Hydriodici (2 per cent.).

(*Syrup of Hydriodic Acid.*)

	Imperial	metric
Potassium Iodide	236¼ grains	27 grammes
Tartaric Acid	223 "	25.5 "
Calcium Hypophosphite	17½ "	2 "
Water	2 fluid ozs	100 cubic cent.
Alcohol (45 per cent.)	A sufficient quantity.	
Syrup	" "	

Dissolve the Potassium Iodide and Calcium Hypophosphite in two fluid ounces (or 100 cubic centimetres) of the water; dissolve the Tartaric Acid in one fluid ounce (or 50 cubic centimetres) of the Alcohol; mix the solutions; shake well and set aside in ice water for half an hour; then filter through a small filter, washing the filter with the Alcohol till the filtrate amounts to three fluid ounces (or 150 cubic centimetres), mix this solution with sufficient syrup to produce twenty fluid ounces (or 1000 cubic centimetres).

Note.—Official in the U. S. P. (1 per cent.), but 2 per cent. is frequently demanded, and therefore meets all requirements. In the '80 edition of the U. S. P. it was directed that the syrup be made from the acid which was prepared direct from iodin, but in the '90 edition it was directed to be prepared by the interaction of tartaric acid and potassium iodide, a simpler and more satisfactory process.

5. Ferri Hypophosphis.

(*Ferric Hypophosphite.*)

$$Fe_2 (Ph_2 O_2) 6$$

Ferric Hypophosphite obtained by the interaction of Calcium Hypophosphite and Ferric Chloride.

Characters and Tests.—A grayish white powder; only slightly soluble in water; entirely soluble in solution of potassium citrate, forming a green solution. Should give no reaction for carbonates phosphate.

Note.—Used in preparation of Syr. Hypophosphitum.

6. Ferri Phosphas Solubilis.

(*Soluble Ferric Phosphate.*)

	Imperial	metric
Solution of Ferric Sulphate	10 fluid ozs	200 cubic centim.
Solution of Ammonia	23 "	460 "
Citric Acid	4 ounces	80 grammes
Sodium Phosphate	6 "	120 "
Water	A sufficient quantity.	

Mix sixteen fluid ounces (or 320 cubic centimetres) of the solution of Ammonia with two pints (or 800 cubic centimetres) of distilled water; gradually add to this the solution of Ferric Sulphate, previously diluted with two pints (or 800 cubic centimetres) of distilled water; stir constantly and briskly, keeping the ammonia in excess; set aside for two hours, stirring occasionally; pour it on a calico filter, and wash with distilled water until free from Sulphates. Dissolve the Citric Acid in its own weight of water; warm the solution on a water bath; add the Ferric Hydroxide, previously well drained; stir them together until nearly the whole of the Hydroxide has dissolved, or until the Citric Acid is saturated with Ferric Hydroxide, add the Sodium Phosphate and stir till it is dissolved; strain through flannel, adding some distilled water if necessary. Evaporate to the consistence of syrup; and spread it on plates of glass, so that, when dry, the salt may be obtained in scales.

NOTE.—Largely prescribed by the profession in Canada.

7. SYRUPUS FERRI PHOSPHATIS COMPOSITUS.

(Compound Syrup of Ferrous Phosphate.)

	Imperial		metric	
Iron Wire	37½	grains	4.3	grammes
Precipitated Calcium Carbonate	120	"	13.7	"
Potassium Acid Carbonate	9	"	1	"
Sodium Phosphate	9	"	1	"
Cochineal	30	"	3.5	"
Sugar	14	ounces	700	"
Phosphoric Acid	A sufficient quantity.			
Water	"	"		

Dissolve the Iron Wire in one fluid ounce (or 50 cubic centimetres) of Phosphoric Acid and half an ounce (or 25 cubic centimetres) of water in a flask, heating gently till dissolved. Dissolve the Precipitated Calcium Carbonate, Potassium Carbonate and Sodium Phosphate in half an ounce (or 25 cubic centimetres) of Concentrated Phosphoric Acid and two ounces (or 100 cubic centimetres) of water. Mix the solutions, filter and set aside. Boil the cochineal and six fluid ounces (or 300 cubic centimetres) of water for fifteen minutes; cool, filter and wash the filter with sufficient water to make seven fluid ounces (or 350 cubic centimetres). In this dissolve the sugar with the aid of heat, and strain. When cold, add the solution of phosphates and sufficient water to measure twenty fluid ounces (or 1000 cubic centimetres).

NOTE.—Large amounts used.

8. Syrupus Hypophosphitum.

(Syrup of Hypophosphites.)

	Imperial	metric
Calcium Hypophosphite	394 grains	45 grammes
Sodium Hypophosphite	131 "	15 "
Potassium Hypophosphite	131 "	15 "
Tincture of Lemon	87 minims	10 cubic cent.
Sugar	14 ounces	700 grammes
Water	A sufficient quantity.	

Dissolve the Salts in ten fluid ounces (or 400 cubic centimetres) of water, dissolve the sugar in the solution without the aid of heat; add the Tincture of Lemon, and finally enough water to make twenty fluid ounces (or 1000 cubic centimetres) of the Syrup.

Dose.—1 to 2 drachms.

Note.—In frequent demand: contained in the U. S. P.

9. Syrupus Hypophosphitum Compositus cum Quinina et Strychnia.

(Compound Syrup of the Hypophosphites with Quinine and Strychnine.)

	Imperial	metric
Calcium Hypophosphite	80 grains	12 grammes
Potassium Hypophosphite	40 "	6 "
Manganese Hypophosphite	40 "	6 "
Iron Hypophosphite	40 "	6 "
Potassium Citrate	30 "	4.5 "
Strychnine Hydrochloride	2 "	0.3 "
Quinine Hydrochloride	8 "	1.2 "
Sugar	14 ounces	700 "
Water	A sufficient quantity.	

Dissolve the Calcium, Potassium, and Manganese Hypophosphite in four ounces (or 200 cubic centimetres) of water; dissolve the Iron Hypophosphite in four ounces (or 200 cubic centimetres) of water with the Potassium Citrate. Mix the two solutions, add the Quinine and Strychnine Hydrochlorides. When dissolved, filter into a vessel containing the sugar and shake until dissolved, strain and add water to measure twenty ounces (or 1000 cubic centimetres).

Note.—Here, as in connection with the Liquor Antiseptica Aromat., the Committee is of opinion that public necessity must over-rule considerations of pharmacological value. While experimental proof has not been induced as to the value of this preparation, practitioners so frequently prescribe the syrup of hypophosphites without designating whether proprietary preparations are indicated or the hypophosphites alone, or containing quinine or strychnine, that it is essential for the Pharmacopeia to give some definite formula in order to avoid confusion.

Public Health and Hygiene.

. . . IN CHARGE OF . . .

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

SECOND QUARTERLY MEETING OF THE PROVINCIAL BOARD OF HEALTH.

THE second quarterly meeting of the Provincial Board of Health of Ontario began at 10 a.m. April 24th, and continued during that and the following day. Present: Dr. Vaux (Chairman), Dr. Bryce (Secretary), Dr. Cassidy, Dr. Oldright, Dr. Kitchen, Dr. McCullough, Dr. Douglas.

The special report on the small-pox epidemic of the past quarter was read by Dr. Bryce. It was, he said, the worst outbreak in the province in twenty years, regard being had to the number of municipalities affected rather than to the number of persons attacked or the fatalities which had ensued. It was to the accident of the disease first occurring in lumber camps in unorganized districts that the sudden and widespread character of the epidemic was due. A case at Bracebridge early in February resulted in tracing small-pox to a hitherto unsuspected point, Sudbury, where eight cases had existed unknown to the authorities. The cases at the American Hotel, Sudbury, were reported by the police magistrate as chicken-pox on February 13th, whereas on the day previous the mayor had telegraphed to Dr. Bryce that small-pox existed. It was found that cases of the disease had been reported as grippe, chicken-pox, etc. Within a short time cases were reported from many points in Algoma. In some cases the local health officers persistently refused to recognize the disease as small-pox, and had declared it to be chicken-pox. In almost every instance the hands of the local health boards had been tied, and the disease had spread thereby.

It might be excusable in a physician to make a mistake in diagnosis, but to persist therein to the detriment of the public was enough, in Dr. Bryce's opinion, to characterize him as an enemy of the State. Dr. Bryce went on to say that the conduct of certain physicians in opposing the health authorities was worthy of severe reprobation. In view of the privileges accorded to the profession, the Ontario Medical Council, he recommended, should summon

such offenders before it and punish them. They were more dangerous to the community than self-confessed quacks.

Equally to be reprobated were those medical men who had issued certificates and required money for the same, saying that the holders had been vaccinated when such was not the case. The train inspectors had discovered many cases. As an instance, Dr. Bryce said that in one well-authenticated case, a doctor had issued certificates at a dollar apiece to thirty lumbermen, without examining one of them. The men simply walked past his desk, and he issued certificates as fast as he could write their names.

Dr. Bryce went on to show the enormous extent of the country the department has been obliged to cover in their efforts to stamp out small-pox. In New Ontario the lines of cummunication by railway, lake, and river totalled 5,755 miles; the lumbermen in the woods in the winter totalled 25,000, and there were 400 surveyed townships, with scattered settlements. For the most part this territory was unorganized for municipal purposes.

Dr. Hodgetts, chief inspector for the Government in the organized districts, gave a supplementary report as to the preventive measures. Praise was given to the health officer at Sault Ste. Marie. Accompanying the report was a schedule, showing the centres and the cases, which latter numbered 430. In London and Middlesex County the source of infection is unknown, although one case has been traced to Cleveland, Ohio. In the other older settled districts, including Toronto, the infection has been traced directly or indirectly to the Sudbury district, and other points in Algoma. There were scattered cases through Carleton, Hastings, Haldimand, Huron, Lennox and Addington, Leeds and Grenville, Norfolk, Ontario, Simcoe, Victoria, Northumberland and Durham, and Muskoka. But the disease really flourished in Algoma, Renfrew, and Nipissing. Nearly every municipality in these districts was affected, more or less. In Algoma and Nipissing cases of disease going through entire lumbermen's boarding houses, were chronicled, while in other districts cases of small-pox going through an entire family were shown. The number of deaths reported was, however, almost incredibly small, less than one per cent.

The question of vaccination was dealt with in the general report on contagious diseases, which was read and passed at the morning session.

In a report of contagious diseases for the quarter, Dr. Bryce went thoroughly into the question of small-pox, stating that there were fifty centres of small-pox in Ontario—the most serious outbreak in the history of the Board. Not only is the disease prevalent throughout Ontario, but also throughout the United States, there having been thirty-two deaths from it in the State of New York during March.

Many of the lumbermen in Ontario have not been vaccinated, and would be in a bad way should small-pox break out in the camps.

Anti-vaccinationists have done not a little harm in raising a cry against inoculation, when history for the past hundred years has proved that vaccination either wards off or modifies the attack.

Local health authorities should take precautions against the spread of the dread disease. Not only should all children be vaccinated, but eight days after vaccination should be examined by the medical health officers, who shall ascertain whether or not the vaccination has proved successful before giving a certificate. In the course of his report the doctor asserted that he had heard, on good authority, that some doctors gave an applicant a powder, supposed to contain vaccine, which he or she was instructed to place upon the tongue. This, by some homeopathists, was believed to be a satisfactory vaccination, said Dr. Bryce.

But in one instance a doctor was known to have given a powder to an applicant, together with a certificate of vaccination. The powder was taken home and dumped into the sink, while the certificate was held as proof (?) of vaccination.

In conclusion, the report emphasized the importance of vaccination, referring to many prominent authorities to substantiate the stand taken. "The urgency of the situation," said the report, "demands that this Board make public its views on a subject which the public have been ignorant or careless of, and that it impress its views in the most positive manner upon local health authorities in all parts of the Province."

Dr. Bryce included in his report references to other infectious diseases. The increase of deaths from consumption had been very marked, being 236 from the beginning of the year to March 31st, as compared with 186 deaths for the same period last year. There has been a large increase in diseases of the respiratory organs, but no marked increase in contagious diseases. In fact, there had been a slight decrease in scarlet fever, and a very slight increase in diphtheria.

Reference was also made to the bubonic plague in California. Notwithstanding reports to the contrary, the report read, it is quite evident to medical men that the plague has obtained a hold on that State.

In the general correspondence it was shown that in reply to a query from Ayr as to the infection of public library books, Dr. Bryce had recommended the use of steam sterilizers. An outbreak of a horse disease of a mysterious character was reported from Little Britain.

During the morning session (April 25th), the Board received unsatisfactory advices regarding the small-pox cases on the Brant

County Indian Reserve, and immediately took energetic steps to stop the spread of the disease. Dr. Secord, the physician on the reserve, and the local boards, sent representations that the disease had existed there and been suppressed for several weeks, with persons coming and going all the time. In all five cases are now known to exist. The Board then, on motion of Dr. Cassidy, seconded by Dr. Oldright, passed the following resolution:

"In view of the facts regarding the outbreak of small-pox on the Mohawk Indian Reserve, and in consequence of the requests from the Boards of Health of Caledonia, Brantford and Hamilton, the Provincial Board of Health hereby instructs the Local Boards of Health of Brantford, Caledonia and Onondaga, and other municipalities bordering on the reserve, to require certificates of recent vaccination and of non-exposure to small-pox before allowing persons from the reserve to enter their respective municipalities."

The greater part of the day was spent in formulating regulations under the new Act respecting health protection in the unorganized districts of Ontario. These regulations have been found necessary in order to conserve the public health and to place the financial responsibility on those directly benefited instead of upon the whole Province. The clauses provide that certain sanitary methods must be adopted in the construction of camps and works, and a medical man appointed and paid by the companies employing men. The regulations also provide for the appointment and payment of sanitary inspectors in the small settlements on the lake shore and along the railway lines, which have no municipal organization. Another clause requires the vaccination of all employees of lumber and mining camps.

The following standing committees were appointed for the year: Epidemics, Drs. Cassidy, Bryce, and Oldright; Water Supplies, Drs. Douglas, Vaux, and Bryce; Sewerage, Drs. Kitchen, Bryce, and Douglas; School Hygiene, Drs. Cassidy, Oldright, and Bryce; Legislation, Drs. McCullough, Oldright, and Bryce; Food, Drinks, and Poisons, Drs. Kitchen, Bryce, and McCullough.

Drs. Oldright and Cassidy were appointed a committee to draft resolutions of condolence to the families of the late Dr. J. D. Macdonald, of Hamilton, and C. W. Covernton, of Toronto, former members of the Board.

The plans for a sewerage system for the town of Cobourg were approved of, with certain provisions.

A case of small-pox from Lakefield, Peterboro' County, was reported. It was stated officially that the next meeting of the Board would be in Brantford, June 25th, 1901.

REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF OCTOBER AND NOVEMBER, 1900.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

OCTOBER, 1900.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,214,150	716	2,056	11.1	8	0.04	44	0.2	2	0.01	10	0.05	120	0.6	169	0.9
97%	92%														

NOVEMBER, 1900.

2,095,471	740	1,984	11.3	11	0.06	50	0.3	3	0.01	20	0.1	141	0.8	161	0.9
92%	95%														

Population of Province 2,283,182

Registration Divisions of Province..... 777

Selected Articles.

THE TREATMENT OF SUMMER DIARRHEA IN INFANTS.

BY CHARLES GILMORE KERLEY, M.D., OF NEW YORK,
Lecturer on Diseases of Children in New York Polyclinic Medical School and Hospital; Assistant Physician to Babies' Hospital.

ONE who has had clinical advantages among children in New York City during the hot months for several seasons necessarily comes in contact with a large number of cases of summer diarrhea. A brief review of observations made and conclusions arrived at may not be without value to those whose labors are more particularly in other fields.

Intercourse with physicians from various sections of the country, in post-graduate class-room, in consultation and in private practice, demonstrates that the true nature of summer diarrhea in infants is not appreciated by the rank and file of the profession. The erroneous teachings of the past appear difficult to break away from. The popular conception of the management of this disease is to give a dose of castor oil and then by any means possible to diminish the number of the passages, regardless of its effect upon the patient.

The somewhat comprehensive term, summer diarrhea, is used because it covers the subject-matter better than any other. A classification founded upon the appearance of the stools is impossible, as the appearance often changes from one hour to another. The age of the child, the previous diet, the nature of the infection, the stage of the illness, all influence the character of the passages. A classification based upon the lesion is only possible at the autopsy. At the onset of the illness no lesions exist. Bacteriologic examination of the stools is our only means of classification, and our knowledge of the bacteriology of the intestinal contents in summer diarrhea is not very far advanced and for some time to come will not be of avail to the physicians who are treating the great majority of these cases. If they will believe, however, with bacteriologists and clinical workers in diseases of children whose opinions are worth anything, that in summer diarrhea we have a disease due to virulent organisms, much will be accomplished. In a child ill with this disorder we have a child poisoned. There

may be a direct infection through the means of contaminated food, infected feeding apparatus, or by any means whereby bacteria may pass into the gastro-intestinal tract.

The extremely acute cases with excessive vomiting, purging, marked prostration and rapid loss of flesh, so-called cholera infantum, are no doubt due to direct infection. The infection may also take by indirect or autoinfection. The food is unsuitable or given improperly. Indigestion results and a culture field is prepared. Excessive heat plays a most important part in autoinfection. Through its influence the bodily functions are all depressed, the bile and the digestive juices, the natural disinfectants, are not furnished to the gastro-intestinal tract in the required strength and volume, with the result that the pathogenic organisms always present in the intestine are given an opportunity for vigorous growth and development. The undigested milk at the temperature of the body furnishes an ideal culture medium. We thus have at the commencement of the disorder a poisoning process at work with the *contents* of the intestine involved, and not the intestinal structure.

Summer diarrhea differs from any other ailments of early life in that there is no tendency for it to get well if left to itself. It is a disease which must be treated upon the appearance of the first symptom, and treated vigorously. If properly-directed treatment can be carried out promptly we can almost always relieve the patients before the bacteria and their products have produced inflammatory and ulcerative lesions, before grave changes have taken place in the liver and kidneys, organs which are particularly liable to become affected by toxic products in the circulation. Autopsies personally made upon 226 children dying with summer diarrhea show lesions which in extent and severity correspond very closely with the duration of the illness. In intensely toxic cases which die within two or three days, very slight changes are found in the intestines. Small local areas of congestion, a slight swelling of the lymph nodes, with here and there desquamation of the epithelium, constitute the changes that have taken place. In prolonged cases which die after two to four weeks' illness, ulceration to a considerable extent is to be found.

With the nature of the disease appreciated the rational treatment is simple. It consists chiefly in elimination and diet. Endeavor to remove from the digestive tract the bacteria and their products and to give nourishment which will not furnish a medium for their growth and development. If the case is of a normal type with green, loose stools containing undigested milk and mucus, a teaspoonful of castor oil or one grain of calomel in divided doses (one-tenth of a grain hourly) should be given. If the case is not seen until two or three days have elapsed and the stools are fre-

quent, from eight to twelve in twenty-four hours, the castor oil should be omitted. A smaller amount of calomel (one-fourth of a grain in one-twentieth-grain hourly doses) is indicated in these active cases. Cases are not infrequently seen in which the stools are infrequent—but two or three in twenty-four hours. The passages are usually very foul and contain a large amount of mucus. There is considerable prostration with low fever. When these symptoms are present active purgation is required, and a teaspoonful or two of castor oil should be followed in twenty-four to forty-eight hours by a grain of calomel in divided doses. If vomiting is present neither the castor oil nor the calomel should be given until the vomiting has been controlled by the diet and stomach-washing.

The physician who wishes to do his full duty to the patient must stop the milk diet at once. It matters not whether the diet is breast milk or cow's milk, or whether the cow's milk is sterilized or not sterilized. It matters not whether the milk is peptonized or not peptonized. If the diet is condensed milk, goat's milk, or any of the meal foods containing evaporated milk, they must be discontinued with the first indication of illness. It matters not whether the stools are frequent or infrequent, neither does the character of the stool cut any figure; as long as it shows evidence of intestinal derangement the milk diet must be discontinued. The younger the patient the more imperative the necessity of discontinuing the milk. In some it will not be necessary to keep milk from the child more than twenty-four hours. Others will not be able to take it with safety for weeks. Other nourishment must be substituted, and this can be done regardless of the age of the patient. It is useless to give laxatives and wash out the few bacteria and then feed milk to the hosts that remain. The milk is also harmful, although to a lesser extent, in that undigested curds form which pass the entire length of the intestinal tract, causing pain and exciting peristalsis.

If milk is to be discontinued what is to be the diet? The nature of the nourishment and the amount given depend somewhat upon the nature of the case. If there is vomiting as well as diarrhea the stomach must be washed and nothing whatever given for a few hours, when a teaspoonful of water may be tried. If the water is retained it may be repeated every fifteen minutes. If it is vomited, feeding by gavage* should be brought into use. If the water is retained it may be followed by an equal amount of dextrinized barley-water. The next step is to give increased quantities of dextrinized barley-water at long intervals.

If the case is one of diarrhea alone without vomiting, I instruct the mother to give from three to five ounces of the dextrinized

* "Gavage in Obstinate Vomiting, Kerley." *Archives of Pediatrics*, February, 1892.

barley, either plain or salted, to which is added from one to two ounces of chicken, beef or mutton broth. These may be alternated with a teaspoonful or two of beef juice or one dram of liquid peptonoids which is added to the barley. Children soon tire of any one article of diet other than milk if it is the only nourishment given. The various substitutes suggested to be added to the barley change the taste, and its use can be continued for weeks if necessary. The broths must be given cautiously, as in some patients they have a decidedly laxative effect.

I have practically discontinued the use of the white of egg in the water. Many children fail to digest it, and when such is the case it produces almost as much disturbance as milk. The amount of the diet selected that may be given at one feeding should correspond to the amount in ounces of the nourishment given in health, but it should be given at shorter intervals. I allow a child to be fed every two hours if he will take it. If there is much thirst plain boiled water may be given at any time.

For the past year I have been using the barley dextrinized for the reason that if the cereal is predigested a stronger mixture can be taken and just so much more nourishment furnished the patient. If thick, non-dextrinized barley is used, or if a weaker barley or wheat or rice-water is used for a considerable time, there is apt to be indigestion, fermentation and colic. My instructions to the mother are as follows: Add two even tablespoonfuls of barley or wheat flour to one pint of water. This is to be boiled twenty minutes and strained, boiled water being added to make the quantity one pint. When the mixture has cooled to the temperature of 100 degrees F. add one teaspoonful of Cereo, which is a preparation of diastase made for this purpose. If barley is used in this strength it will furnish the child a food containing approximately .3 proteids, .07 fat, and 2 soluble carbohydrates. If wheat flour is used, the mixture will contain approximately .4 proteids, .046 fat, and 2.4 soluble carbohydrates.

Upon resuming the milk diet grave errors are often made in giving too strong a milk mixture. The use of milk must not be commenced until the stools are nearly normal, with not over three in twenty-four hours. Not more than one teaspoonful of milk should be added to each feeding of the cereal water for the first twenty-four hours. If this is well borne the quantity may be increased one teaspoonful every day. When six teaspoonfuls can be taken without harm the increase may be made at the rate of half an ounce per feeding every two or three days until the customary milk strength is reached. If there is a return of the diarrhea upon using the milk it must be discontinued at once. The mother or nurse must be instructed to do this on their own responsibility. In a few there will be no unpleasant results if the

milk is commenced in from one-fourth to one-third the usual strength. It is a dangerous practice, however, to begin so strong a mixture. Time and again I have known the disease to return in a greatly aggravated form for this reason. After a severe attack of summer diarrhea many children will be able to digest but a very weak milk mixture for the entire summer. Every year we have a few who cannot return to the use of milk in the smallest quantity until October or November. In these cases scraped beef, beef juice and predigested cereals are our main reliance. Occasionally these cases will be able to digest and exist upon proprietary food until the advent of settled cool weather. A teaspoonful or two of one of the soluble proprietary foods may be added to each feeding of the dextrinized barley.

In the breast-fed the attacks are not apt to be so severe, and they usually can return to the breast after twenty-four or forty-eight hours.

Among the long list of drugs which have been used and advocated for this trouble there are but few that are worth mentioning. I use practically but four, castor oil and calomel, already referred to, bismuth subnitrate (Squibb's) and opium. Salol, resorcin, the naphthol preparations, so-called intestinal antiseptics, furnish no aid in handling these cases, and are very apt to upset the stomach. The new astringents, tannigen and tanalbin, have a very limited field of usefulness. The disinfection of the intestine in the use of drugs through the means of the drug coming in contact with the bacteria and destroying them is not possible of accomplishment with any drug known at the present time.

The growth and development of bacteria may be prevented, however, by other means than by drug contact. A culture-field must be made as inhospitable as possible. This is best accomplished by withholding the milk diet and in the use of large doses of subnitrate of bismuth—bismuth subnitrate, 12 to 20 grains; aromatic syrup of rhubarb, 2 minims; water to make one dram. The addition of the aromatic syrup of rhubarb makes a very palatable mixture. The above amount is given early in a severe case, once in two hours to those less urgent.

Opium should always be given with caution and with special indications. It should never be given when the passages are less than four in twenty-four hours. I rarely give it unless the passages are more than six or seven. It is given only when the passages are very frequent or when they are large and watery. In the cases in which there is considerable fever and prostration, evidence of considerable systemic poisoning, from four to six passages are a benefit. These are to be looked upon as drainage. If this drainage is cut off by the use of astringents and opium, the temperature rises, the patient becomes rapidly septic and dies, but

the doctor has the satisfaction of having controlled the diarrhea. When opium is to be used I prefer to give it in the form of Dover powder; from one-fourth to one-half a grain every two or three hours for a child 8 months of age.

The cases already referred to in which there are infrequent foul stools, prostration and stupor require only calomel and castor oil, diet and bowel irrigation. For the fever, packs, baths and sponging are all that are necessary. In case a heart stimulant is necessary, avoid alcohol, for the reason that it is very liable to derange the stomach and injure the already overworked kidneys. Strophanthus, strychnine and digitalis may be used as in other diseases when a heart stimulant is necessary. In cases of direct infection, with marked prostration and uncontrollable vomiting, a hypodermic of morphine is always of service. For a child one year old, 1-100 grain may be given with 1-600 grain atropia.

As with all useful measures irrigation of the colon has been overdone. I fail to understand why a colon that is emptying itself every thirty to ninety minutes requires washing out. If the physician will take the trouble to irrigate one of these active cases after a passage he will find the water returning clear. Irrigation is of the greatest service when the stools are infrequent and foul. It is also useful in active cases, those having from six to eight passages daily, particularly if there is any blood or much mucus. The irrigations are carried out at eight, twelve, or twenty-four hour intervals, depending upon the nature of the case. As a rule a one per cent. boracic-acid solution or a normal salt solution (heaping teaspoonful to the pint) is employed. If the amount of mucus is very large, or if the stools contain blood, a one-per-cent. solution of tannic acid is used instead. It is well to prepare two quarts of the solution to be used and discontinue when the water returns clear. The temperature of the solution should range between 95 degrees and 100 degrees F., except in cases of high fever, where it may be used as cold as 60 degrees F. When the child is moribund and athreptic, with low temperature and low vitality, hot water acts as a decided stimulant.

For irrigation a soft rubber catheter, No. 14 English, one that will not bend on itself if used properly, is attached to a fountain syringe, the bag of which should be held three feet above the patient's bed. The child must lie on the back or left side, with legs well drawn up. The tip of the well-oiled catheter is passed into the rectum. When an introduction of two inches has been effected, allow the water to pass in slowly. The water will distend the parts and facilitate the further introduction of the tube. Press the folds of the buttocks together until the colon is filled. This in a child of eighteen months of age will require twenty-four to thirty ounces of water. When this, or a lesser amount, at least

one pint, has passed in allow the solution to run in and out at the same time, the water being forced out alongside the tube.

A word regarding prophylaxis may not be amiss. It is not enough that the child be given sterilized milk and breast milk; he must be made comfortable. The clothing should be of the lightest and on very hot days he should be in the open air in the shade, if in the country; if in the city, the coolest room in the house or apartment is far better than hot, dusty streets. Whether in the city or country two or three fifteen-minute spongings with water at 60 degrees F. will make the child ever so much more comfortable. Further, we know the digestive capacity is lessened during the heated term, and the milk should be reduced in strength from one-fourth to one-third on the very trying days, adding water to replace the quantity removed.

The mother should always wash her hands most carefully with soap and hot water before preparing the infant's food, before handling nursing bottle, nipples, or any nursing apparatus. The infection may be carried to the feeding utensils by the hands of the mother, other children may become infected, or reinfection take place in the one already ill. A child with summer diarrhea should not come in contact with other young members of the family, for summer diarrhea unquestionably must be placed in the list of communicable diseases.—*Medical News.*

A MEDICAL WORK SEVEN THOUSAND YEARS OLD.

Full Translation Just Completed of the Ebers Papyrus, an Egyptian Book Devoted to the Diseases of Man, and Their Cure.

For 2,300 years Hippocrates of Kos has been known to the world as the "Father of Medicine." This distinction, however, has been wrested from the ancient Greek by the discovery and translation of an early Egyptian papyrus treating of the subject of medicine, with date so remote as almost to place Hippocrates within the ranks of modern physicians.

English medical literature is about to be enriched by the translation of this papyrus, generally admitted by Egyptologists to be the oldest book devoted to the science of medicine extant. The work is known to scientists as the Papyrus Ebers, and is supposed to have been written during the reign of Bicheres, a king of the fourth dynasty, 4688 to 4666 B.C. Thus the original document is nearly 7,000 years old, and it contains the written genesis of the art of healing.

Although brought to light in 1873, no complete translation of the Papyrus Ebers has been made. The document is carefully preserved in the library of the University of Leipsic, and it remained for a Chicago man to make the first English, and the only complete translation. The work was undertaken about a year ago by Dr. Karl H. Von Klein, of Chicago, a well-known student of the Oriental languages, and the author of a number of medical works, among them a book on the "Medicine of the Talmud." Dr. Von Klein is a member of the various medical and scientific societies of the world, and devotes his labors exclusively to the translation of medical works. His English translation of Papyrus Ebers, a volume of several hundred pages, will soon be ready for the press.

Page 98 of the Papyrus Ebers is devoted almost entirely to remedies for household ills. Its contents clearly indicate that the ancient Egyptian housewife was beset with cares similar to those of the modern housekeeper. It reveals likewise the fact that women early made use of cosmetics. The remedy given for the falling out of the hair is ascribed to the mother of King Teta of the first dynasty. The contents of page 98 are as follows:

"Lines 1 to 2—Preparation to prevent mice from getting into articles.

"Lines 2 to 6—Preparation to prevent hawks from stealing.

"Lines 6 to 9—Preparation to prevent rats from eating corn in granary.

"Lines 12 to 21—Preparations for making housekeeping pleasant, followed by a recipe for fumigation."

Instructions for the mixing of a compound containing dry myrrh, juniper berries, incense, mystic branches, buckthorn, nebat and raisins are given, with the information that they are to be mixed and placed over the fire.

The author gives directions for a similar preparation, to which is added honey, the whole to be boiled, mixed, and made into little pills, which are to be used by women for scenting purposes. Other pills concocted in a somewhat similar manner are for scenting the breath.

A tonic for the hair, a medicine for removing superfluous hair, and a hair dye complete the page.

To Egyptologists, the story of the finding of Papyrus Ebers possesses all the characteristics of a romance. In the winter of 1872-73 Georg Ebers, of Leipsic, and his friend, Ludwig Stern, spent several months at Thebes in quest of rare documents For a time the two scientists made their dwelling place in one of the tombs of Abd-ed-Gurnah, and associated daily with the Arabs of Luxor. A wealthy citizen of Luxor showed to Ebers the antiquities which he, little by little, had obtained from the fellah on the

other side of the Nile, and at length revealed to him the fact that he was the possessor of a papyrus obtained from the same source.

Upon close inspection of the papyrus Ebers made the startling discovery that it was a document of great value, and in an unusual condition of preservation. He longed to possess the document himself, but had not means to meet the demands of the owner, who was not altogether aware of its full value. However, receiving the financial assistance of Max Gunther, a wealthy Englishman, Ebers purchased the treasured papyrus, and conveyed it to his home in Leipsic, there to study its contents at leisure. It was finally turned over to the library of the University of Leipsic for safe keeping. In order to better preserve the valuable antiquity, it was cut into 29 pieces, and each piece placed under a glass.

According to the statement of the Egyptian possessor, Papyrus Ebers was found in a tomb in the so-called Il Assassit, a part of the Necropolis of Thebes, reposing between the legs of a mummy. Since the finder of the papyrus was dead, it was impossible to refer to the exact tomb which formerly contained the treasure.

When Ebers came into possession of the papyrus it consisted of a single, tightly-rolled piece of the finest yellow-brown papyrus. The width of the document was 30 centimetres, and the length of the written part 20.23 metres. No other papyrus known to Egyptologists is better preserved, and not a single letter of the document is missing.

The text of this perfect ancient record is divided into pages, each of which is numbered. The page numbers are placed over the first line in the middle of each page, and run from 1 to 110. Singularly, the numbers 28 and 29 are missing, although the text continues uninterruptedly. The omission is explained on the ground that the Egyptian considered 110 to be a perfect number, and by this means the writer was enabled to complete his book with the required number of pages.

Each page of the papyrus contains either 21 or 22 lines, with the exception of pages 3 to 21, which are considerably smaller; the pages are 22 centimetres in width. The script in which the papyrus is written is extraordinarily regular, and is partly in black and partly in red ink. This form of writing is known as the hieratic, and is one of the three forms used by the ancient Egyptians. The others are the epistolographic and the hieroglyphic.

The exact date of the writing of the book of which Papyrus Ebers is a copy is not known, but it is believed that it dates back to 4666 B.C. The document itself refers to the eighteenth dynasty, in the sixteenth century B.C., but when the papyrus was unrolled a calendar was discovered containing the following inscription:

"In the ninth year of the King of Upper and Lower Egypt . . . of the everlasting."

Before the last epithet is the framed name of a king whose identity is still in doubt. Dumchen, a recognized authority on Egyptology, believes that the author of the calendar did not insert the name of the reigning king, but that of Bicheres, of the fourth dynasty, who reigned 1,460 years earlier. Dr. Von Klein is of the opinion that the calendar calls attention to the date of transcription and that the original was written much earlier.

Egyptologists agree that between the 28th and 16th centuries B.C. the practice of medicine was in the hand of witchcraft. During this period the law was so stringent that a person advancing a theory for the treatment of disease other than that established by the priests was put to death. Consequently the work, which bears the marks of the period of witchcraft, if written at all prior to the date named in the calendar, must have been written at least 1,200 years before. This makes it highly probable that the original book was written during the reign of Bicheres, or at least 4666 B.C. At all events, the copy of the papyrus is itself the oldest medical work extant, and contains the historical genesis of medicine.

A large proportion of the diseases known to modern medical science are carefully classified, and their symptoms minutely described by Papyrus Ebers. The prescriptions recommended are in many cases exactly the same as those given at the present time. The work mentions 700 different substances, the greater part of which are taken from the vegetable kingdom. Some metals, and a considerable number of animal extractions were also used. Of the salts only natron (saltpetre), common salt and sea salt, are mentioned. The use of such ingredients as lizard's blood and pig's teeth are in some cases recommended.

The author of the work begins his treatise with an enumeration of the diseases of the abdomen. Universal remedies for headache and stomach troubles, which, as the author says, "the gods prepared for themselves," are also given.

Pages 88 to 101 contain formulas for diseases of the eye, remedies for bites of man or beast, dizziness, baldness, diseases of the liver, burning of the skin, gangrene, exercisms at the outbreak of a fire, wounds, eruptions of the skin, bruises, weariness of the limbs, perspiration of the feet, sore toes, corns, trembling of the fingers, diseases of the tongue, toothache, headache, influenza, discharges of ears and diseases of women. Cosmetics and medicines to take out wrinkles are also given.

That the methods of diagnosis and treatment would be considered somewhat crude by modern physicians may be gathered from the following rules given for liver complaint:

Rules for rehet—that is, suffering in the pit of the stomach; When thou findest anybody with a hardening of his rehet and when eating he feels a pressure in his bowels, his stomach is swollen and

he feels ill while walking like one suffering from heat in the back, then look at him when he is lying outstretched, and if thou findest his bowels hot, and a hardening in his rehet, this is a liver complaint. Then make thyself a remedy according to the secrets in botanical knowledge from the plant of chestnut and from the scraps of dates. Mix it and put it in water. The patient may drink it on four mornings to purge his body. If after that thou findest both sides of his bowels—namely, the right one and the left one—cool, then say of it, that is bile. Look at him again, and if you find his bowels entirely cold, then say to thyself, his liver is cleansed and purified, he has taken the medicine—the medicine has taken effect."

From the contents of Papyrus Ebers it is conclusively proved that the early Egyptian physicians were extremely superstitious, and especially the priest-physicians. The work gives various incantations, of formulas, to be chanted at the time of taking the particular prescription. These are in the nature of prayers to the gods that the medicine may work swiftly and well.

The Egyptians were not alone in this practice. It was customary with both the Babylonians and the Jews, and the Greeks were not wholly free from it. A survival of this ancient custom is found in Russia to-day, where the irregular physicians make it a practice to chant while medicine is being prepared and administered.

The discovery of Papyrus Ebers demonstrates that the Egyptians as early as 3,000 or 4,000 years before Christ possessed an astonishing knowledge of a great variety of remedies, and that their learned men could make observation of disease, combine complicated receipts and use them with judgment. According to this early writer, there were three different classes of medical practitioners in Egypt at the date of the manuscript—namely: The real physician, the surgeon and the conjurers. The relative standing of the several classes is not known.

The origin of medicine is certainly to be looked for in the valley of the Nile, and the Papyrus Ebers opens a wide era for the students of the history of medicine and pharmacology. The Egyptian physicians were well advanced in ophthalmology The collection of Hippocrates, edited 4,000 years later, did not contain more eye diseases, although more clearly and more agreeably described. The number of diseases mentioned in the Papyrus Ebers, as well as the profusion of medicines described, is a source of wonder to modern physicians. The ancient Egyptian physicians must have been experienced diagnosticians, who commanded a knowledge of prophylactic and cosmetic remedies.

The Egyptian oculist was renowned. In the third book of Herodotus is the following passage: "Cyrus sent to Amasis (B.C.

560) and bade him for an oculist—the best in the whole land of Egypt." Darius also sent thither for a body physician, and in the time of Tiberius and Nero, Egyptian physicians regularly came to Rome, usually to heal skin diseases. Herodotus tells us that the Egyptian physicians were accustomed to practise specialties, and that the country was full of physicians. Some confined their attention to diseases of the head, others to the teeth, stomach and intestines.

Greece, long supposed to be the birthplace of medicine, is now known to have derived its knowledge from the Egyptians. Praxagoras, although from Kos, the town where Hippocrates was born and where the temple of Esculapius was built, lived in Egypt. He was the greatest symptomologist and diagnostician of his age. Hippocrates also went to Egypt for his medical training, and on his return established a school of Greek physicians. Although the founder of the present system of pathology, his right to the title of "Father of Medicine" has been dissipated by the revelations contained in the Papyrus Ebers.

ON THE EXTERNAL AND INTERNAL EMPLOYMENT OF ARGENTAMINE.

BY DR. BERGEL, OF INOWRAZLAW.

I HAVE used Argentamine for over two years both externally and internally in numerous cases, and I have found that it not only almost always is an efficient substitute for the nitrate of silver, but in many cases superior to it. Its field is that of all affections of the mucous membranes in which an astringent, antiseptic and antibacterial action is required. Of course, the stage of the disease and the amount of inflammation present must be taken into account. I have treated inflammations of the conjunctiva, pharynx, stomach and intestines, urethra, bladder, and vagina, with solutions of various strengths; and, without going into details, will report my opinions as to its field and efficacy in comparison with similar preparations, the most suitable strengths in which to use it, etc. In gonorrhea the dosage was a varying one in accordance with the symptoms and stage of the disease. The method of employment was also various, being sometimes ordinary injections, sometimes by irrigation, and sometimes by instillation by means of the Guyon syringe. I started on the basis of a 10 per cent. Argentamine, corresponding to a 1 per cent. silver nitrate solution. For anterior injections I found 1-400 to 1-200 solutions most suitable. In acute cases I

began with the weaker strength; and my results show that it best filled the indications as to efficacy and absence of irritant effect. I gradually increased the strength of the injection, and found that 1-300 was well borne by almost all patients without subjective or objective ill effects. Even 1-200 usually caused no irritation of any account. In some cases when this solution was allowed to act for some time, say ten minutes, there was moderate burning and slight increase in the discharge, phenomena that did not appear with the lesser strengths.

Upon the whole Argentamine seemed superior to the nitrate of silver in that it caused the inflammatory symptoms to disappear more rapidly, and the abundant secretion to diminish, become mucoid, and cease more quickly. As a rule the gonococci disappeared earlier.

The ordinary injections were done three or four times a day, being retained five to ten minutes in the urethra each time. In the more chronic cases, and especially in posterior urethritis, stronger solutions were employed; and when the affection was circumscribed in the latter location, instillations of 1-10 solutions were made with the Guyon syringe. In very many cases this concentration was well borne, and did not irritate. Twenty per cent. instillations, however, were found to be less suitable, and I should not advise their employment. The 10 per cent. concentration is equivalent to a 1 per cent. nitrate of silver solution, and is at least as efficacious, and perhaps more so, than a 2 per cent. solution of the older salt, and causes less irritation and trouble. In general the irrigations caused no irritation at all; and in the isolated cases in which they did, it was very slight in degree.

For urethral irrigation and in gonorrheal cystitis, after the termination of the acute symptoms, solutions of 1-1000 to 1-500 in distilled water were commonly employed. The irrigations were made once a day, and no disturbing by-effects, burning or dysuria, such as are commonly seen with the mildest applications, ever occurred. On the other hand, the therapeutic action of the drug was far superior to that of the older remedies. The results were very excellent, and sometimes brilliant. Combination of ordinary injections with the irrigations sometimes increased their curative effect. Irritation of that sensitive organ, the bladder, rarely occurred; and when it did, in delicate individuals, it was very slight. The method did excellent service in several cases of prostatic disease with chronic vesical catarrh. Irrigation was naturally not employed in fresh cystites; but in recent infectious urethritis they could be used without any trouble at all. In fact, in these cases improvement or cure was more rapidly effected than with the ordinary injections. Argentamine was employed with good results in a few cases of gonorrheal vaginitis and cervicitis.

In the former, irrigations of Argentamine 1-1000 worked very satisfactorily; in the latter, applications of 5 and 10 per cent. strengths were made with good results and without causing much irritation or any other by-effects.

In pharyngeal diseases, Argentamine was employed where silver nitrate would formerly have been used, being always found its equivalent, and in many cases its superior. This latter seemed evident in a case of syphilitic pharyngitis amongst others. Five to 10 per cent. solutions were used, and were somewhat less unpleasant to the patient than nitrate solutions would have been.

In the ophthalmological field I employed Argentamine in all the suppurative conjunctival diseases in the form of 1 to 2 per cent. instillations three to four times daily, or as a brush application once or twice a day in 5 to 7 per cent. solution. In the great majority of cases I was well pleased with its action. The nitrate of silver does very well in many of these cases; but the new drug possesses the advantage of being usable in relatively weaker concentrations to get the same effect, and the irritative symptoms and subjective difficulties caused by its employment were distinctly less. I administered it in suppurative conjunctival catarrhs, acute follicular catarrhs, acute trachoma, chronic suppurative trachoma, and blenorrhea neonatorum. In almost every case its action was at least equal to that of the lunar caustic; and in the acute follicular catarrhs and trachomas it seemed to influence the swelling and suppuration very favorably and quickly, and without unpleasant irritation. In gonorrheal conjunctivitis of the new-born I had excellent results in some cases; in others I rather felt safer with the usual 2 per cent. nitrate solutions, and changed to them. Corneal affections, and more especially pannus trachomatosus, were no contraindications to the employment of the Argentamine; on the contrary, they seemed to be favorably influenced by the applications.

The internal employment of Argentamine soon demonstrated to my satisfaction that there were no unpleasant by-effects connected with this use of the drug. The first case in which I used it per os was that of a phthisical colleague who suffered from attacks of diarrhea which neither astringents, nor opium, nor combinations of the two, could relieve for any length of time. I administered a 1-2 per cent. watery solution with a little glycerin, giving a tablespoonful every two or three hours. The result was visibly and extremely satisfactory. The six to eight daily diarrheal stools speedily became reduced to two, the feces became more consistent, and the appetite increased. There was no complaint of heartburn, colic, or any other unpleasant effects. I was loth, however, to attribute the brilliant results to the Argentamine alone, supposing that other factors unknown to me had probably been at

work. I soon had chances, however, to convince myself of the therapeutic efficacy of the drug in other cases in adults, and more especially abundant opportunity to study its effects in the gastro-intestinal affections of childhood. I was, of course, slow to abandon the older and well-tried remedies, calomel, bismuth, etc., for a new preparation. But I reflected that the nitrate of silver still maintains a high place in the treatment of gastro-intestinal affections, and in many cases with justice; and my first good result, and more especially the entire absence of any ill effects, encouraged me to overcome my hesitation. The results, whilst not always especially brilliant, were very satisfactory in the majority of instances; the remedy being, of course, employed on certain special indications, which will be mentioned later. A very slight burning was the only ill-effect noticed when the stronger solutions were employed: but this was only temporary, and occurred in but exceptional cases.

I employed Argentamine in entero-colitis after the first severe symptoms passed away, and, of course, in conjunction with a rigorous diet; in intestinal catarrh, in enteritis, in phthisical diarrhea, and as an injection in catarrh of the large intestine. The dosage and concentration of the drug varied with the age of the patient and the condition of the gastro-intestinal mucous membrane. A teaspoonful to a tablespoonful was administered every two or three hours of a 1-2 to 1 per cent. solution, either plain or with glycerin. Often the 1 per cent. solution could be taken by the tablespoonful without trouble; in isolated instances it caused slight irritation. With the 3-4 per cent. solution this never occurred; and even with the stronger one the symptoms were very slight and transitory. The therapeutic efficacy of the 1-2 to 3-4 per cent. solutions was, however, quite equal to that of relatively more concentrated silver nitrate ones; indeed, in very many cases, they were far superior, both as regards their astringent as well as their antibacterial effect.

In the gastro-intestinal catarrhs of children and adults an Argentamine solution of the above strengths could often be employed with effect when other remedies failed. For purely astringent effects, however, we possess other and more suitable drugs. Regulation of the diet, etc., seems in some cases to make all medication superfluous, or at least only accessory; but the direct influence of the Argentamine could often be plainly seen. The very best results were obtained in enteritis, probably on account of the union of astringent and antiseptic properties in the remedy. In catarrhs of the large intestine repeated irrigations of Argentamine solutions of strengths of 1-500 to 1-1000 were made with favorable effects.—Abstracted from *Therapeutische Monatshefte,* Berlin, July, 1900.

A FEW THOUGHTS ON THE ALKALOIDS.

BY FORDYCE W. BENEDICT, M.D.

METAPHORICALLY speaking, for the last year or more I have been sitting on the fence seeing the procession of Alkaloidal enthusiasts go by. The breezy and refreshing articles of "ye Editors" of the *Clinic* have stirred the latent molecules of my cerebrum, and roused ir to new energy my reasoning faculties as the thoughts passed on from one cell-station to another in my brain.

You all remember the graphic language of the famous Red-Jacket: "The winds of a hundred winters have whistled through my branches and I am dead at the top." Although none of us can record so many years on the staff of life, do not many of us, as the years go by, find ourselves gravitating into a condition of "innocuous desuetude," and that we are prematurely dead at the top?

I wonder if you who are working so earnestly in this broad field of innovation against old theories and slumbrous ideas, are aware of the great amount of good you are yet to accomplish for the medical profession. Is it not a palpable fact that men who have been educated and schooled to prescribed methods of thought in their medical training, still cling to their early teachings, despite all the advancement science is making? Notwithstanding this onward sweep of thought in the development of new theories in medicine to-day, let us not wholly lose sight of the facts lying at the foundations of our early teachings, which time has proven of so much value, but rather bridge over the years with truths gleaned from experience, making a safe passage for our weary feet as we jog along in the wider fields opening up to us daily.

When I first began the study of the Alkaloids, I thought your articles decidedly sensational, like patent medicine ads. Aconitine, strychnine and digitalin were panaceas for every affection. On closer examination I found these remedies were principally recommended for certain stages in disease, and were but the preliminaries for the initiatory treatment, looking to the adoption of other remedies as the disease advanced. I therefore concluded there was "method in your madness," which led me to a more careful study of your theories.

When we come to consider what a varied application the alkaloids have in the treatment of chronic diseases, there is opened up to us a wider field for treatment for these affections than any other methods present to us. In most chronic diseases we have a condition of imperfect circulation, a stasis of secretion and excretion. In such a state of the system who shall say that medicines admin-

istered in bulk are not wholly inactive, their several constituents antagonizing each other and thus proving inadequate to rouse the system from its dormant state?

We all know that most plants possess more than one medicinal principle, for instance, the plant Pilocarpis Pinnatifolius Jaborandi. The leaves are the part used and they possess two principles—pilocarpine and jaborine—each one of them possessing exactly opposite physiological action on the system. The former stimulates the peripheral termination of efferent nerves going to the glandular system, resulting in enormous secretion of saliva from the submaxillary, sublingual and parotid glands—in fact, its influence is actively manifested throughout the whole glandular system, with the probable exception of the secretion of bile from the liver—while jaborine when taken into the system has an effect almost identical with that of atropine, suspending activity in all the glands of the body through paralysis of the different nerves leading to them.

Here, then, is an example of the superiority of the alkaloidal medication, in that you have in this system the isolated principles of the various medicinal medicaments contained in plants, each one possessing its own individual physiological action, and only that. The physician who prescribes jaborandi will get an action varying with the relative proportion of the two alkaloids named in the sample used. The proportion of each may be so nearly alike that the one completely counteracts the other, and *nil* is the result.

In prescribing the alkaloids I do not remember an instance where I have been disappointed in obtaining the results I anticipated, in some degree at least—yes, I do remember one. My disappointment, though, was that it did not kill the patient. It was when I first began the use of them and was not very familiar with the dosage. The subject was a child about three years of age, who was suffering an acute bronchial affection. There were a number of persons present, all talking at the same time while I was putting up the medicine, and this was one reason why I made a mistake.

I thought, here was a subject where the alkaloids were indicated. I took out my little case and counted out 24 granules of emetin for the effect on the mucous membrane, and ten granules of aconitine for the fever, and added 24 teaspoonfuls of water, directing a teaspoonful of this to be given every hour or half-hour as the symptoms indicated.

I did not realize what I had done until I reached my office. Then there was a sudden rush of blood to my face, my hair almost stood on end, and I collapsed into my office chair with a dull and sickening thud.

Finally I began to reason about the matter: The patient was

seven miles away and in all probability would be dead before I could get there. Then an inspired thought came to me, that the emetin would surely cause severe emesis, thereby counteracting the poisonous effect of the aconitine, and I began to have more lenient visions of the possible result.

Next morning I went to see my patient as early as I thought at all proper without exciting suspicion. As I neared the house I began to look for indications pointing to a fatal result of my mistake. I did not see any little mattress hanging on the line, no bedroom window partly raised to let in the air, but everything looked as quiet and peaceful as though no attempt at murder had been enacted. As I entered the house I opened the door very gently, and to my great relief, there sat that little devil on its mother's knee, breathing as quietly as the sleep of the just, and looking up into my eyes with a roguish twinkle as much as to say, "You didn't kill me *this* time, did you, Doctor?" Evidently the emetin had done its work, and I have always felt a sort of reverence for that particular drug ever since.

Shall we say that alkaloidal medication smacks of homeopathy? Not necessarily. I am generous enough to admit, however, that when the theory of Hahnemann was promulgated there came to the medical profession faint glimmerings of a new era in the practice of medicine. Out of the teachings of homeopathy there emerged a more attentive study of pathology, elucidating the phenomena of disease to its simpler manifestations, enunciating more strongly symptomatology, and depending less upon nomenclature as an aid in the treatment of disease.

Does it make any difference what we call ourselves in the schools of medicine? I think not. I believe our aim should be Eclecticism in its simplest signification—"select the best." Out of all the incongruous accumulation of theories the ages have brought to us, from Esculapius down to the present time, elucidate the truths which the wisdom of our fathers has proved to be the best, resting our hopes upon them, and whatever the new in thought brings to us to-day.

Notwithstanding all that we have learned and may yet learn, how many new phases in disease come to baffle our boasted knowledge, and we often feel like looking up into the face of Nature, and resting our weary heads upon the bosom of Mother Earth, and saying: "O, thou that dost hold the secrets of the universe, unlock for me the mysteries of thy subtle potencies, that I may know of a certainty the hidden energies garnered up somewhere in the storehouse of thy creation."

Alas, how sad it is that life is so short in which there is need to learn so much; and at last, so far as this world is concerned, we all come to the ignominious end: "What the cradle rocked the spade buried."—*Alkaloidal Clinic.*

LARGIN.

LARGIN (Silver-Protalbin, Lilienfeld) is reported to be a powerful bactericide and astringent, excelling the other silver-albumin compounds extant in point of antiseptic power, penetrativeness, and non-irritancy. Recommended in gonorrhea in all its forms, and in ophthalmoblennorrhea, externally; also in gastric or intestinal ulcer, internally.

Largin occurs as a gray powder, uniformly containing 11 per cent. of silver. It is soluble in about ten parts of water, and also soluble in glycerin; insoluble in alcohol or ether. Aqueous solutions are best prepared by half filling the prospective containers with hot water, throwing in the Largin, and shaking violently; the bottles are then filled with water.

Largin is a bactericide and astringent, like silver nitrate. It is reported non-irritating and not precipitable by sodium chloride or albumin. Externally, it has thus far been used chiefly in gonorrhea, in 1-4 to 1 1-2 per cent. solutions (according to stage), three times daily; also in ophthalmoblennorrhea (5 per cent. solution freely twice daily; 2 per cent. solution as *prophylactic*); and internally, in gastric and intestinal ulcer. The dose is five to eight grains, in capsules or pills. In bowel ulceration salol coated pills are indicated.

Dr. C. Pezzoli, (1) of the Institute for Pathologic Anatomy in Vienna, treated some sixty cases of gonorrhea with excellent results by means of Largin. He says:

"Solutions were injected, varying in strength from 1-4 to 1 1-2 per cent., according to the stage of the disease. The injections were made thrice daily, the fluid being retained for 5 to 10 minutes in the morning and at noon, and from 15 to 30 minutes in the evening.

"In comparing the therapeutic results of Largin with those obtained with protargol, our next best antigonorrheic, it was found that of the recent acute anterior cases, 77 per cent. were cured without a sign of posterior inflammation; whereas, in the protargol cases only 64 per cent. of the anterior group remained free from posterior complication during the treatment. Thus, the Largin treatment reduced the frequency of the extension of the recent pathologic process to the posterior part of the urethra to 24 per cent., as against 36 per cent. under protargol."

Dr. Kornfeld, (2) of Vienna, employed Largin in out-door cases in much the same manner as had Pezzoli, with this difference, that for the first few days he had the prolonged injections

remain in the urethra but two to five minutes in the morning and at noon, and five to ten minutes in the evening, rising to Pezzoli's periods of duration after that. Of the cases thus treated by the author, twenty-nine were, at the time of writing, sufficiently progressed to be reported. Fourteen of these were of recent acute anterior urethritis. Of these last, the author says:

"The secretion early decreased in consistency and quantity; the cocci soon disappeared from it; the urine became clear, and the filaments, after becoming free from cocci, disappeared likewise. The treatment was of from 16 to 50 days' duration."

Another group, of nine cases, had developed posterior urethritis and cystitis when seen. Of these it is reported:

"In two of them the symptoms had presented an acute form from the start. The acute condition had to be first combated by dietetic measures and morphine. The result was brilliant, the cleaning of the second urinary portion being obtained on the average within six days, without the rise of any complication. All the cases were considered cured."

In a third group, of six cases, embracing *chronic* forms of urethritis, Largin did not prove superior to silver nitrate.

The author concludes thus:

"Largin is a superior antigonorrheic, which essentially shortens the acute processes, serves to prevent its extension to the posterior portion, yields very good results in irrigation, and instillation of already extant subacute posterior urethritis; and is certainly not surpassed by any of its congeners."

Largin has been used by Dr. Marczel Falta (3) in acute and subacute conjunctivitis, corneal ulcers, blepharo-conjunctivitis, catarrhal ophthalmia, trachoma, and affections of the lachrymal ducts. The author sums up his opinion at the end of a detailed account in the following language:

"Taken altogether, better results were obtained from the Largin than from any of the other silver albuminates. Its slight irritating effect is referrable to its alkalinity; but that is far from being a disadvantage, particularly in cases of conjunctival catarrhs in which there is a profuse discharge. No symptoms of argyrosis were ever observed."

Dr. Hugo Pretori, (4) whose report embraces more than eighty cases, says, in concluding his paper:

"Largin is suitable for replacing silver nitrate in many cases, because it acts just as well and as rapidly, perhaps even more so, while its application is far less dangerous and painful."

Dr. L. Furst (5) reports on the use of *Largin pills,* 8 grn. per dose, internally, to replace the digestively decomposable and hence unreliable silver nitrate. The cases were two of gastric ulcer and one of hemorrhagic erosion of the lesser intestine. For the latter

the pills were keratinized. The medication proved entirely innocuous, and the regeneration of the mucosa appeared to be promoted by it.

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THE TREATMENT OF INSOMNIA.*

DR. OTTO DORNBLUTH, in reviewing the various means and methods of treating insomnia, says that the fear of medicinal hypnotics is unfounded. Used properly and with care, a medicinal hypnotic may save many from becoming neurasthenics, and thus prove of the highest value. While the author is an advocate of hygienic, dietetic and hydrotherapeutic measures, he fully recognizes that there are cases where all such measures fail; and at such times to neglect the use of medicinal hypnotics means to fail in our duty. Not only are the latter more efficacious than many of the lauded hydrotherapeutic measures, such as a prolonged warm bath or a cold pack, but they are also less injurious. The assertion of the hydrotherapeutists that none of their measures prove injurious lacks proof; on the contrary, the author believes that the baths and cold packs have in time a weakening influence and that their after-effects are at least as injurious as those of a reliable medicinal hypnotic.

One of the best medicinal hypnotics with which the author is familiar is Dormiol. This combination of amylene and chloral combines the advantages of both these chemicals without sharing the disadvantages of either. In all his experience with Dormiol, the author has never noticed any unfavorable by- or after-effects. The minimum effective dose the author found to be two teaspoonfuls of the ten per cent. solution, but frequently from three teaspoonfuls to a tablespoonful may be required. Almost without exception, sleep rapidly follows the administration of Dormiol—frequently in ten minutes, and but seldom in half an hour. The sleep generally lasts a number of hours. In melancholia the author has given Dormiol—as an adjunct to the opium treatment—in daily doses of five drams to one ounce (of the 10 per cent. solution) for weeks at a time, and never, he repeats, has he observed any unpleasant effects from its use; there should, therefore, be no hesitation in administering Dormiol for insomnia for as long a period as may seem necessary. Another advantage of Dormiol is its reasonable price, it being the cheapest of all the newer hypnotics.

* Aerztliche Monatschrift, No. 1, 1901.

THE TREATMENT OF LEG ULCERS.

DR. MAX JOSEPH, of the Polyclinic for Cutaneous Diseases in Berlin, gives in the *Dermatologisches Centralblatt* a report on the treatment of ulcers of the leg by the use of Crurin, in which he says:

In the cases in which the patient complains of painful ulcer, and in which a profuse secretion is present, I prescribe at first, for several days, compresses of acetate of alumina, after which the Crurin is employed. In the second group, in which there is a noticeable dryness and a slight tendency to healthy granulations, I use Crurin from the start. Both these groups comprise moderately large ulcers. Where they are of large extent I apply a dressing with Unna's zinc-gelatin, which covers all the surrounding regions, leaving the ulcer itself exposed. Over this Crurin is applied.

Many patients tolerate even the pure Crurin, but others complain of pain after its use, and for this reason I have for some time adopted the custom of employing equal parts of Crurin and starch. In this form it is well borne and does not lose its effect. Very sensitive persons might complain of slight pain, even after the latter application, but it ceases within ten to fifteen minutes, and in many cases this is followed by an agreeable sensation. The powder is dusted on with a camel's hair pencil in the morning and evening, and when the surface is dry, the dressing need only be renewed every second or third day. I will omit the publication of any histories of cases, as they have already been cited by Forchheimer and Steiner, neither can I say anything very definite in regard to the duration of the treatment. The latter must naturally depend upon a number of varying circumstances. I may, however, state that Crurin has already become indispensable to me in the treatment of ulcers of the leg, and that I would be very loth to abandon its use.

Toronto Clinical Society.—The annual meeting of the Toronto Clinical Society was held on May 1st, in one of the committee rooms of St. George's Hall, when the following officers were appointed: President, Dr. J. F. W. Ross; Vice-President, Dr. E. E. King, A.M.S.; Recording Secretary, Dr. G. Elliott; Corresponding Secretary, Dr. A. A. Small; Treasurer, Dr. W. H. Pepler. Dr. Ross moved, seconded by Dr. Anderson, that the Society donate $25.00 towards the Dr. Conerty defense fund, and that a private subscription be opened with the treasurer.

The Canadian Journal of Medicine and Surgery

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Editorials.

ANTI-EXPECTORATION LAWS

THE war against the habit of expectorating on the streets has been vigorously proclaimed in several cities of the United States; but so far the results have not been an unmixed success for hygiene. Last April a policeman was nearly murdered in St. Paul, Minnesota, when attempting an arrest for the violation of an anti-expectoration ordinance, and other similar events may be expected to

follow if the law is too scrupulously enforced. The ordinance seems revolutionary to the man in the street. Besides, to fine a man for spitting on the sidewalk will end in driving all smokers and chewers indoors. This may be tolerated in winter, but would be intolerable in warm weather. It would add to the cleanliness of the sidewalk, but would be disastrous to the houses and would bear too severely on the housekeepers.

For two generations, at least, book-writers and newspaper writers have inveighed against the unlovely habit of spitting in public, for which male Americans are remarkable. And when one considers the unquestioned reverence and respect paid to women in America, it is passing strange that no effort to suppress a practice so destructive of feminine attire has been seriously essayed. So much for the esthetic side of the question. Better results are obtained from the medical dogma, which teaches that healthy people may acquire tuberculosis from the inhalation of microbe-laden dust, such as is whirled around the streets. Anxious to co-operate with hygienic opinion, city corporations have passed ordinances making it unlawful to expectorate in public, and imposing fine or imprisonment for violating the same.

The Department of Health of the city of New York has displayed considerable energy in arresting and punishing the spitters in public places. Similar legislation has been enforced in Boston and Chicago, but the vile habit of expectorating in public places seems to go on unchecked. In Canada we lag behind our American compeers in this kind of hygiene. No Canadian municipality has yet passed an anti-expectoration ordinance. Our hygienists either do not attach importance to this mode of tubercular infection, or else consider that, like some forms of taxation, the habit of expectoration is uncontrollable.

That the contagion of tuberculosis may be acquired from tubercular sputa is now considered axiomatic. That preliminary being conceded, it will be necessary to organize a campaign against public spitting. It would be idle to suppose that, in obedience to any ordinance, no matter how well conceived, or in fear of penalties, however severe, men will stop spitting on the streets. The habit is so inveterate, and cleanliness in disposing of sputa so uncommon, that it will be necessary to begin the training of the rising generation of boys in the schools.

A boy learns and retains easily everything he believes to be true, and which is explained to him by the teacher in a simple but authoritative and convincing manner. A boy will soon understand the uncleanliness of the spitting habit. If the danger of the sputa is also explained to him, danger not only for the spitter himself, but his neighbors and all other persons who breathe in this dangerous dust, the boy will immediately understand the great interest of the question, and after some time will give up the practice of expectorating on the floor or the ground. In this way a generation opposed to an improper method of expectorating in public will grow up. The Minister of Education could address the teachers, who are in general intelligent and good-hearted, and who would be most anxious to introduce a reform, which would benefit themselves as well as the scholars. He could also request the co-operation of the school inspectors, who, in visiting the schools under their charge, should pay attention not only to the science of teaching as exemplified there, but also to everything relating to the physical and moral welfare of the scholars.

A circular might also be issued by the Provincial Board of Health in which the requisite information respecting the dangers of expectorating in public could be given in a simple but authoritative style. Read, commented on, explained by teacher and inspector, and hung up in the school as a notice, such a circular would certainly bear fruit, teaching the boy from his earliest youth ideas of cleanliness and hygiene, which he would not forget in a maturer age.

But if such a programme is to be effective, cuspidors must be placed in the school-rooms and corridors. There will not then be any reason for soiling the floor, the pupils will not be compelled to swallow their expectoration, and they will be taught an object lesson which will bear fruit in after life. J. J. C.

IODIDE OF POTASSIUM.

As iodide of potassium is one of the ten cardinal drugs with which the practice of medicine may be carried on—we leave to our readers the naming of the other nine—the purity of a sample used is of great importance.

Butler describes pure iodide of potassium as " colorless, trans-

parent or translucent, cubical crystals or a white, granular powder, having a peculiar, faint, iodine-like odor, and a pungent, saline, and afterwards bitter taste."

When impure, the crystals are of a dead white color. The ordinary impurities noted by chemists are: Iodine and iodate of potassium (the actions of which are severe on the digestive tract), chloride of potassium, bromide of potassium, and carbonate of potassium. Without reference to difficult chemical analysis, a plain clinical test of a specimen of iodide of potassium may be made as follows: Add some pure acetic acid to a watery solution of iodide of potassium, and, if the solution does not lose its transparency, the specimen may be considered practically pure, the permissible 4 per cent. of impurity being allowed (Martinet). Martinet also advises that before prescribing this salt for a patient, who may require its use for a considerable time, the practitioner should test the permeability of the patient's kidneys. This precaution is all the more necessary because defective permeability of the kidneys is a capital factor in the pathogenesis of the phenomena of iodism. Iodide of potassium may be detected in the urine or saliva shortly after it has been swallowed.* Analyses of samples of urine, made at intervals of ten minutes, enable a practitioner to estimate if there is any notable delay in the elimination of the salt by the kidneys. Delay is noted in cases of interstitial nephritis. Iodide of potassium may be recognized in a sample of urine as follows: Add to the urine in a test tube a few grains of starch paste, and afterwards a few drops of chlorine water, to set free iodine, and, if iodide of potassium is present, a deep blue precipitate will appear from the formation of the blue iodide of starch. The blue color disappears when the solution is warmed, and reappears when it is cold. Should the employment of this test enable the practitioner to discover a notable delay in his patient's elimination of iodide of potassium, he should proceed cautiously or abstain from prescribing this salt altogether. In certain cases it produces untoward instead of curative effects,

*The following analyses illustrate this test: A. B., who had not taken iodide of potassium for years previous, took a watery solution of five grains of iodide of potassium at 5.40 p.m., May 1st. His urine, voided at 5.55 p.m., gave no iodine reaction. Urine voided at 6.05 p.m., ten minutes later, and twenty-five minutes after ingestion of salt, gave a characteristic iodine reaction. The saliva and nasal mucus examined at 7.50 p.m. gave the same reaction. May 2nd, 8 a.m., his urine gave the iodine reaction, 14 hours, 20 minutes after ingestion; nasal mucus a trace.

which are known as iodism. Thus edema of the glottis has been noted in a patient who had taken one gramme (fifteen grains) of iodide of potassium, the prior employment of methylene blue having revealed a notable delay in urinary elimination.

The iodide of starch test is also useful in discovering whether a patient is really taking iodide of potassium, which has been prescribed, but which he is suspected of not taking. Failure to discover the salt in his urine or saliva would explain a seeming want of success in curing a syphilitic lesion by the use of a specific remedy. J. J. C.

REPORT OF A SPECIAL COMMISSION ON THE PLAGUE IN SAN FRANCISCO.

THE report of the special Commission appointed by the United States Government to investigate the existence of plague in San Francisco, appears in the *Journal of the American Medical Association,* April 27th, 1901. The report confirms, what had been previously asserted as true in the medical and secular press, though denied by the Governor of the State of California and his subsequent appointees, that plague has existed and does still exist in the Chinese quarter of San Francisco. The report states that from February 5th to February 16th, thirteen dead Chinese were inspected, and of these six were undoubtedly infected with plague. A seventh may have been a case of plague, which went unrecognized. The report further states: "The study of cases during life and the inspection of bodies after death prove that it is often difficult and, under certain circumstances impossible, to make a diagnosis of plague, even *post mortem,* without bacteriological examination. In outspoken bubonic cases, there will be but little, if any, difficulty in diagnosis, either during life or after death, provided the observer has had sufficient experience with the disease; but, in the absence of primary buboes, the unskilled observer will miss practically every case, and even the practitioner who has had much experience with plague may be deceived."

The commissioners declare further that, once it is established that plague exists among the Asiatics of a town, every Asiatic, who has fever, should be suspected of having plague and be so treated, until the disease is proved other than plague, and every dead body should be treated as a plague cadaver until bacterio-

logical examination has proved the absence of the bacillus pestis.

Details are given of the autopsies made on eight cadavers, six of which gave unmistakable evidences of plague.

Experimental inoculations were also made in guinea-pigs. The usual procedure was to inoculate at least two animals from each human case; one with portions of the spleen and another with portions of the lymph glands. The commissioners deem it important to state that characteristic lesions were obtained from inoculated material derived from every case in which bacilli were found in cover-slips, including Case 7, in which very small numbers of bacilli were detected in the spleen. Descriptions are given of the types of infection noticed in the animals, the local lesion, the conditions observed in the spleen, liver and lungs, and the subserous hemorrhages.

The report concludes with the observation that the bacteriological examination of the six cases referred to, demonstrated the presence of the bacillus pestis in each case. The report is signed by Simon Flexner, M.D., F. G. Novy, M.D., and Lewellys F. Barker, M.D.

Since the receipt of this report, the Governor of the State of California, and the local authorities of San Francisco, have bowed to the inevitable, and have graciously consented to acknowledge that plague does really exist in San Francisco. Inspectors are engaged in cleaning the Chinese quarter. The work will consist in a thorough inspection of all dwellings, the sweeping of streets, and the closing up of underground habitations.

Now that they have got their hands in, the State Governor and the municipality of San Francisco should give the Six Companies to understand that American laws and hygiene must be supreme, and that Chinamen must conform to the rules of sanitation. Chinatown may not then be so picturesque, but it will cease to be a menace to the health and the pockets of the people of San Francisco, and a source of peril to the cities of North America. J. J. C.

THE ONTARIO MEDICAL ASSOCIATION.

THE meeting of the Ontario Medical Association on the 19th and 20th inst. takes place in the Normal School Buildings in this city. The various committees have been working hard recently in order

to make the 1901 meeting of our Association a big success, and we sincerely trust that this will be the case, and that the Toronto members will turn out in earnest, and by lending their presence at the various sessions, and paying their registration fees (a most important item on the programme) assist in making our annual convention what it should be.

The discussion will include :

1. "Gastric Ulcer," introduced by Dr. J. W. Edgar, of Hamilton. This will be taken part in by several members from both the medical and surgical aspects of the subject.

2. "Empyema," introduced by Dr. Ferguson, of London, and Dr. Turnbull, of Goderich.

3. "Extra-uterine Pregnancy," introduced by Dr. Garratt, of Kingston.

Dr. Elliott, of Gravenhurst, will read a paper upon "Tuberculosis in Sanatoria," and Dr. Osborne, of Hamilton, upon "Field Service in the South African War." Dr. Charles P. Noble, of Philadelphia, Pa., will be one of the invited guests, and will read a paper upon "Complications and Degenerations of Fibroid Tumors of the Uterus, with Reference to the Treatment of those Growths." Dr. Prevost of Ottawa, will read a paper upon "Intra Spinal-Cocainization."

EDITORIAL NOTES.

An Hospital for Goderich.—At a meeting of the Daughters of the Empire, held at Goderich on May 6th, it was decided to erect a marine and general hospital on a suitable site. A provisional board was appointed. Several generous contributions were made, and free sites have already been offered.

Dr. Bryce's Charges of Misconduct on the Part of Physicians.—We direct the attention of our readers to the report of the second quarterly meeting of the Provincial Board of Health, which appears at page 385. The charges made by Dr. Bryce are serious, and deserve to be considered carefully by the Medical Council of Ontario.

The Chicago Policlinic Special Course.—The following Ontario practitioners took advantage of the recent Special Course that was offered by the Chicago Policlinic, mention of which was made in our March issue: Dr. A. J. Gould, Waterford; Dr. M. Ferguson, Ethel;

Dr. D. McEachern, Milverton, Dr. W. E. Olmstead, Caledonia; Dr. A. G. Elliott, Lucknow.

A New Medicine Concern.—The incorporation of the United States Ferrol Company to manufacture and sell medicine, and with an authorized capital of $1,000,000, is announced. The provisional directors are Benjamin Madill, banker; George W. Monk, Dr. John L. Davison, Dr. Alex. McPhedran, and Dr. George A. Bingham, all of Toronto.

New Ideas in Medicine.—Most people who take an interest in the terminology of medicine, know that bacterium is derived from *βακτηριον*, a little stick, and was formerly restricted to a genus of fungi, characterized by short, linear, inflexible, rod-like forms, without tendency to unite into chains or filaments. Its usual meaning is a micro-organism. In the *Toronto Journal of Osteopathy*, December, 1900, we observe the following: "The English for 'bacteria,' says Dr. Still, is '*buzzard.*'" Try again, Osteopathy! A buzzard is not remarkable for sense.

Causes of Death in Small-pox.—The causes of death in small-pox (*La Presse Medicale*, March 3rd, 1900, p. 135) as verified by autopsy in the Lyons (France) Isolation Hospital, 1899-1900, are as follows: Cases, 792; deaths, 142; 17.9 per cent. Causes of deaths: Primary hemorrhage, 43; secondary hemorrhage, without other complication, 13; broncho-pneumonia, 37; pulmonary edema with pulmonary congestion, 17; pneumonia, 6; advanced tuberculosis, 5; pericarditis, 3; myocarditis, 2; acute nephritis, 2; abortion without other complications, 4; stillborn children, without lesions, 3; intestinal invaginations, 1; no autopsy, 6; total, 142.

The Death of Dr. T. H. Little, of Toronto.—One of the saddest deaths among the members of our profession in Canada for years past was that of Dr. T. H. Little, of this city, a few weeks ago, from confluent small-pox, contracted while in attendance upon a patient afflicted (in the early stages) with this dread disease. Dr. Little died in the Small-pox Hospital some days after being removed there by the Medical Health authorities, his case having from the first proved exceedingly severe, and in spite of the best medical treatment, resulted fatally. There is not one reader of this journal but sympathizes most deeply with the widow and sorrowing family of the deceased gentleman.

Cobourg Insane Asylum.—Hon. Mr. Stratton, Provincial Secretary, and Inspector Christie visited Cobourg lately re the opening of the Victoria Asylum for Women there in September. Dr. McNicholl, of Cobourg, has been appointed Superintendent, and Dr. Harriet Cockburn, of Toronto, has been appointed Assistant Physician. Dr. McNicholl will retire from his private practice and spend his time until September at other asylums, familiarizing himself with his new duties. The appointment of Dr. Cockburn is a new departure in Canada, and is made in recognition of the claims of lady physicians, especially in an institution for women. Dr. Cockburn has had experience, having been connected with the Dakota State Asylum for the Insane.

The Residual Urine of Prostatic Cases.—From the attentive observation of a considerable number of cases of prostatic enlargement in elderly men, A. G. Miller (*Scottish Medical and Surgical Journal,* August, 1900) concludes there is no good reason why a prostatic patient should empty only the greater part instead of the whole of his bladder. Urinary residue, he thinks, is due to neglect on the part of a patient to quite empty the bladder, and accumulation of urine is the result of this bad habit. He thinks elderly men after urinating in the ordinary way, should wait a minute or so and try to urinate again, irrespective of the quantity of residual urine. Two consequences follow this precaution: The urine does not sojourn in the bladder, and the contractile power of the bladder becomes greater.

The Mississippi Valley Medical Association.—It is announced that the dates of the next meeting of the Mississippi Valley Medical Association have been changed from the 10th, 11th and 12th of September to the 12th, 13th and 14th of September. This change has been made necessary because the dates first selected conflicted with another large Association meeting at the same place. The meeting is to be held at the Hotel Victory, Put-in-Bay Island, Lake Erie, O., and the low rate of one cent a mile for the round trip will be in effect for the meeting. Tickets will be on sale as late as September 12th, good returning without extension until September 15th. By depositing tickets with the Joint Agent at Cleveland and paying 50 cents the date can be extended until October 8th. This gives members an opportunity of visiting the Pan-American Exposition at Buffalo, to which very low rates by rail and water will be in effect from Cleveland. Full information as to rates can

be obtained by addressing the Secretary, Dr. Henry E. Tuley, No. 111 West Kentucky Street, Louisville, Ky. Members of the profession are cordially invited to attend this meeting. Those desiring to read papers should notify the Secretary at an early date.

Treatment of Carbon Monoxide Poisoning with Oxygen.—In a recent report to the Academy of Sciences, Paris, Dr. Grehant shows that curative results have been obtained in cases of carbon monoxide poisoning, by causing the animals experimented with to inhale oxygen. Thus in the case of an animal poisoned with carbon monoxide, and which was in a dying condition, the inhalation of a 90 per cent. oxygen gas caused, after an interval of one hour, 100 cubic centimetres of its arterial blood to contain 18.8 per cent. of oxygen, and only 1.1 per cent. of carbon monoxide. In a similar form of poisoning, if the affected animal is made to breathe pure air, after an interval of three hours, 100 cubic centimetres of its arterial blood will contain 16.6 per cent. of oxygen, and 4.5 of carbon monoxide; that is to say, four times more carbon monoxide than after one hour's inhalation of oxygen. The elimination of carbon monoxide from the blood is, therefore, considerably facilitated by employing inhalation of oxygen. This treatment should be tried in man in cases of poisoning by illuminating gas.

Opposition to the Medical Council.—A deputation of physicians, headed by Dr. Sangster, of Port Perry, himself a militant member of the Ontario Medical Council, waited on Hon. E. J. Davis, as the only Minister of the Crown on the premises, at the Parliament Buildings on the 3rd ultimo. They desired to have a test case submitted to the Courts as to the legality of the annual tax of $2 imposed on the profession by the Medical Council in return for the privileges they enjoy as a close corporation. Some of the doctors of the Province have been recalcitrant in the payment of this tax. A few weeks ago, it is stated, the Secretary, Dr. Pyne, sent out notices to about 700 physicians that if they did not pay the tax their names would be struck off the list of licensed practitioners. About one hundred paid up on this threat, but the other six hundred have failed to do so, and these the deputation claimed to represent. In addition to Dr. Sangster, Dr. Hillary, Bowmanville, Dr. Thorn, Woodbridge, and Drs. Bingham and Gray, Peterboro', were present. The argument of the

deputation was that they received no benefit in return for the fee they paid for membership in the Ontario College of Physicians and Surgeons, of which the Council is the governing body. The balance of arguments largely consisted of the contentions which Dr. Sangster has annually voiced in the meetings of the Medical Council of Ontario. It was held that the offices and examination rooms were too large and luxurious, that the present medical building should be sold, and that a few cheap rooms should be rented. Dr. Sangster also gave utterance to a familiar note when he stated the present Council was run by the college representatives and homeopathists. A general protest against the methods of the present Council was entered. Hon. E. J. Davis promised to lay the matter before the Attorney-General. It is probable that there will be a stay in the matter until the Council meets this month.

Treatment in Small-pox.—Professor Courmont and his assistants at the Lyons Small-pox Hospital attach great importance to treatment in combating the complications of small-pox. Hygienic attentions, isolation of cases of broncho-pneumonia, and suppression of dry-sweeping in the wards will prevent a considerable number of pulmonary disorders. They organized a regular service of baths, which worked from morning to night. Twelve bathing tubs were used, some of which were heated by gas, others by steam. Each patient got a lukewarm bath of from fifteen to twenty minutes' duration every day. Thirty grammes of bichloride and an equal quantity of tartaric acid were put in the bath. A spray of bichloride, 1-500, was used for the face, several times a day, a wad of cotton being placed over the eyes as a protection. Clean bedsheets were constantly used. No odor was observable in the wards. Even if the bichloride had not been used, the simple daily use of the bath would have obliged the attendants to keep the patients clean. Additional results of bathing were: Diuresis, sleep, and relief from suffering. In but one of 792 cases was slight ptyalism observed, with some general disorder of slight duration. In the ocular disorders of small-pox, the following formula was employed, and proved very useful:

℞ Methylene blue..... 0.20 grm. (gr. iij.)
Aq. destill..... 100 grm. (℥iiis.)

Every patient having a vesicle or pustule on his conjunctiva, or even a simple conjunctivitis, had drops of this solution introduced

into his eyes five or six times a day. Forty-five cases of eye-disease were treated without the loss of an eye. Prior to the introduction of this treatment, four patients had lost their eye-sight through small-pox, although the bichloride and biniodide of mercury had been employed (in subconjunctival injections). Red light (Finsen) was tried in four cases and pronounced practically useless. Serum therapy was considered useful but not indispensable.

A New View of the Prevention of Tuberculosis.—A rather novel view (*Progres Medical,* p. 232, April 6th, 1901) on the prevention of tuberculosis was recently presented before the Academy of Medicine, Paris, by Drs. Robin and Binet. These gentlemen attach great importance to demineralisation of the human organism, and augmentation of the exchanges of the respiratory gases, as signs of a predisposition to tuberculosis. This great augmentation exists, moreover, not only at the beginning of the disease, when it may be an important sign in the differential diagnosis, but at all periods and in every form of consumption. Looking over several tables, we see that the respiratory chemistry of tubercular subjects is of a special type, having relations to respiratory capacity, percentages of gases exchanged in expired air, ventilation, volumes of carbon dioxide exhaled, oxygen consumed or fixed by the tissues in a given time, and in relation to the weight of the person experimented with. In conditions of the body which are antagonistic to consumption, such as arthritism, the respiratory exchanges are on an average less than the normal rate. This is an important fact, giving the key to that antagonism between gout and tuberculosis which all clinicians, after Pidoux, have raised to the dignity of a pathological law. The same observation may be made of scrofula, a condition of the bodily tissues, in which only local forms of tuberculosis germinate. Putting aside contagion, the condition of the tissues of the body or the soil counts for much in tuberculosis. This is almost the datum of Hippocrates, who wrote, "Phthisis is a consumption." The prevention of tuberculosis does not consist altogether in public and private measures adopted to prevent the diffusion of Koch's bacillus. If discovered betimes, people predisposed to tuberculosis must be immediately submitted to a medicinal and hygienic treatment capable of modifying in them the functional

and nutritive disorder, which is the necessary condition for the development of the bacillus. In the opinion of the essayists, people cannot be prevented from having pulmonary consumption unless physicians can diagnose a predisposition to it betimes, and afterwards render the bodies of those exposed to it refractory to the germs of the disease.

PERSONALS

Dr. J. O. Orr left for England last month, and will remain away for three months.

Dr. C. M. Stewart has been appointed Medical Superintendent of the General Protestant Hospital, Ottawa.

Dr. and Mrs. Cattermole have removed to 194 Bloor Street west. They have leased their house on Cecil Street.

The new consumptive sanitarium is to be built upon the raised plateau at the top of Bathurst Street, and just north of Davenport Road.

We regret that, quite unintentionally, proper credit was not given to *The American X-Ray Journal* for the article of Dr. Kassabian's, which appeared on page 321 of our May issue.

Dr. James McLeod, son of Mr. Charles McLeod of 510 Jarvis Street, has taken his degree of F.R.C.S. in London, also L.R.C.P.S., and won a scholarship in King Hospital of some value, and received an appointment in that hospital, which will keep him in London for the next eighteen months.

Dr. E. H. Stafford returned to the city a few weeks ago from his trip, to the land of ice and snow, with the sealing fleet. He gives a most interesting account of his journey, and we hope to give the readers of this journal the benefit of an article from Dr. Stafford's pen ere long, entitled "The Ship's Old Medicine Chest."

Dr. Lionel King, well known in lacrosse and hockey circles all over Canada, and now a prominent physician of Carr City, Michigan, was in the city last month on the return trip from his old home in Peterboro'. Lionel says he is out of hockey, lacrosse and baseball for good, and will devote the remainder of his life to healing rather than dealing wounds.

The Physician's Library.

BOOK REVIEWS.

A Manual of Practical Hygiene for Students, Physicians and Medical Officers. By CHARLES HARRINGTON, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with twelve plates and one hundred and five engravings. Philadelphia and New York: Lea Brothers & Co. 1901.

The author says in the preface that his object in preparing this work has been "to provide a students' text-book which should cover the most important topics included in the wide domain of hygiene and be useful in the laboratory and as a reference book for practitioners and health officers." A review of his opinions on the causation of typhoid fever will therefore be interesting, both to medical student and practitioner. The evidence establishing that typhoid fever is a water-borne disease is well put, examples being given from America, viz., the Plymouth (Pa.) epidemic in 1885 and the epidemic at Ashland, Wisconsin, in 1893-94. The latter instance is suggestive to Torontonians, Ashland being situated on an arm of Lake Superior, Chequamegon Bay, and the fever which prevailed there being considered as due to sewage pollution of the town water supply. "An action at law was brought by the widow of one of the victims. In evidence it was shown that he lived continuously in Ashland and drank no water other than that supplied by the water company; that previous to his seizure the disease had prevailed in the city, and that the discharge from the antecedent cases had passed into the waters of the bay by way of the city sewers. The court found for the plaintiff in the sum of $5,000."

The author quotes with approval a paraphrase of a familiar quotation, "Show me a city's statistics of typhoid fever and I will tell you the character of its water supply." He also exhibits a table taken from John W. Hill's work, "The Purification of Public Water Supplies. New York. 1898." Knowing what every citizen of Toronto knows of the sources of our water supply, we are not surprised to learn that the death-rate of Toronto for typhoid fever for 100,000 population is, for the year 1896, 28.5. For purposes of comparison we append the following death-rate from typhoid fever per 100,000 population: London, Eng., 14; Brooklyn, N.Y., 15; Buffalo, N.Y., 20; Philadelphia, Pa., 34.

The influence of a common municipal water supply, instead of that derived from wells, in lowering the death-rate from typhoid fever is described. At the same time statistics are given to prove that if a public water supply is "not protected from avoidable pollution (town sewage), the typhoid rate in that town keeps high." In reference to typhoid fever conveyed by milk, it is shown that the Eberth bacilli can retain their vitality in milk and even in sour milk. Yet there is this difference, that in buttermilk there was always a diminution in the number of the pathogenic organisms, and "this was the more marked and sometimes very rapid with increasing temperatures."

The bugaboo of typhoid fever from sewer air is shown to be foundationless. Its transmission by dust is denied on the authority of Germano and Buchner, though the bacilli may be introduced into the system through contact with the fingers, food (oysters), or eating utensils.

The Pettenkofer "soil theory" in the causation of typhoid fever is discredited. Pollution of food supplies by flies after visiting the sinks is given as a cause of typhoid, particularly in camps. Preventive inoculation is mentioned approvingly. For the benefit of some sanitarians who pin their faith in water testing to the bacteriological method the following sentence is quoted in full (*vide* last paragraph, page 398): "As a matter of fact, then, from what has gone before, it may be said that neither chemical nor bacteriological analysis is infallible. Each has its uses and each may be helped by the other. The value of either lies in the skill displayed in interpreting the results, and this requires quite as much knowledge as the making of the examination itself."

Every physician, old and young, should read this book—the young to get accurate notions about the origin of infectious diseases, and the old to inaugurate a mental house-cleaning of old-time refuse. J. J. C.

International Clinics, a quarterly of clinical lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, M.D., Philadelphia, with the collaboration of Jno. B. Murphy, M.D., Chicago; Alex. D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thos. G. Morton, M.D., and Chas. H. Reed, M.D., Philadelphia; J. W. Ballantyne, M.D., Edinburgh; and John Harold, M.D., London, with regular correspondents in Montreal, London, Paris, Leipsic and Vienna. Vol. I., eleventh series, 1901. Philadelphia: J. B. Lippincott Co. Sole Canadian Agent: Charles Roberts, 1524 Ontario Street, Montreal.

The magnificent clinical lectures as given in the tenth series of "International Clinics," published last year, would be hard to beat, but after perusing carefully Volume I. of the eleventh series we are inclined to think that the editor has again broken the record and given the profession in this book material which, if paid for according to value, would come to a great deal more that the paltry price asked for "Clinics." How, on the other hand, the publishers can do it at the price is a marvel, as the work is not gotten out in a sloppy or cheap manner, but is printed on good paper and the type is a model of distinctness. It will be seen that with such a staff of contributors as the names mentioned above, it would be difficult for any editor to associate himself with brighter minds, or to accept for his book material which should prove more acceptable than that found in Volume I. of this series. Comparisons are always odious, so that we shall not dwell upon any one lecture. They are all good and the book worth possessing.

Introduction to the Differential Diagnosis of the Separate Forms of Gall-stone Disease. Based upon his own experience gained in 433 Laparotomies for Gall-stones. By PROFESSOR HANS KEHR, Halberstadt. Authorised translation by William Wotkyns Seymour, A.B. (Yale), M.D. (Harvard). With an introduction by Prof. Kehr. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1901.

The information conveyed in the title of this work concerning the remarkably extensive experience of the author in the field of gall-stone surgery at once attracts one's attention and demands a most careful consideration of the conclusions he has formed. A critical examination of the volume reveals the fact that the author has, by keen observation, deduced many points of importance concerning the pathology of the conditions under consideration. The clinical symptoms presenting themselves under varied circumstances have been connected with the pathological conditions found, and thus diagnosis has been made much more accurate in the hands of Professor Kehr. One cannot fail to be convinced of the value of these observations on noting the logical presentation of the subject, and we have no hesitation in recommending this small

volume to practitioners as a valuable guide to the diagnosis of gall-stone disease. Whilst the volume deals mainly with the pathology of the condition, we find the author suggests the lir s of treatment by cholelithiasis also. He favors early operation in the vast majority of cases, and blames the physician for many of the unfortunate conditions which are so frequently found in individuals who have suffered recurrent attacks without operative interference. The translation of Professor Kehr's work has been very faithfully accomplished by Dr. Seymour. A. P.

Encyclopedia Medica. Under the general editorship of CHALMERS WATSON, M.B., M.R.C.P.E. Vol. VI., Joints to Liver. Pp. 562. Edinburgh: William Green & Sons. 1900.

This volume is devoted largely to Labor, five articles being devoted to its physiology and six to its pathology, in all nearly two hundred pages. The whole subject appears to be very carefully dealt with. So are also Diseases of the Larynx in eight articles written by Hunt, St. Clair Thomson, P. McBride, Sir Felix Senior, P. Watson Williams, Logan, Turner and John Thomson. The physiology of the Kidney is very well considered in an article by T. H. Milroy, and the surgical affections by E. Hurry Fenwick. To Diseases and Injuries of the Knee-Joint are allotted two articles by Alexis Thomson and A. E. Barker. They are well written, and safe guides. G. Lovell Gulland's article on Leucocythemia is a very interesting and suggestive one, the best probably that has recently appeared. He describes the two varieties under the names "Myelemia" and "Lymphemia," and adopts the views of the Neumann school that in both the leucocytic excess is drawn from the bone marrow, and that lymphocytes do not, as the Ehrlich school believe, arise from the lymphatic glands. He discusses also Löwitt's theory as to the bacterial origin of the disease, but only to reject it in the form in which Löwitt puts it forward. The volume closes with a very condensed but excellent series of articles on Diseases of the Liver by H. D. Rolleston. As is the case with preceding volumes the book is a credit to the publishers. A. M'P.

The Treatment of Fractures. By CHAS. L. SCUDDER, M.D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Second edition, revised and enlarged. Octavo, 433 pages, with nearly 600 original illustrations. Philadelphia: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Toronto. 1901. $4.50 net.

That the profession was waiting for a thoroughly up-to-date work on the important subject of fractures has been demonstrated by the exhaustion of a large first edition of Dr. Scudder's work within a few months of its publication. The present edition is enriched by many X-ray illustrations of a practical and helpful character. No other work has yet appeared giving in such minute and lucid detail the methods now used by experts in the application of plaster-of-Paris *splints*, having all the advantages and none of the dangers of the old plaster *bandages*. In no other work is the art of exact diagnosis and of accurate reduction better taught, and, so far as the knowledge of the reviewer extends, in no other work, in English, has a better account of the ambulatory treatment of fractures been given. The reproduction of illustrations, the presswork and the binding are alike creditable to the publishers. Books of this character reflect credit upon all concerned in their production, and extend the name and the fame of American surgery. N. A. P.

Secret Nostrums and Systems of Medicine. A book of formulas. Compiled by CHARLES W. OLESON, M.D. (Harvard). Eighth edition. Chicago: Oleson & Co., publishers, 35 Clark Street. 1901.

Here is a book that every medical man should have in his possession, not that it is scientific or that it will ever further him particularly in his work in curing the ills that flesh is heir to, but for the reason that the volume is full of most interesting information. It throws a great deal of light upon the composition of the hundreds of patent remedies so widely advertised in the daily

press, and which the manufacturers claim will cure almost anything and everything in sight. If the dear public who so love to have their legs (excuse us, we should say limbs) pulled and their pockets denuded of all they contain in order to procure something which will put hair on a bald head in ten days, cure consumption even in its last stages, remove cancerous growths without the knife (when all doctors, they say, have failed to make even an impression), only knew what was being retailed to them, and for which they were paying from 500 to 1,000 per cent. profit, we feel sure that it would not be so long ere legitimate pharmacy would, as it should, take the place entirely of what is nothing short of deception. Doctor, buy this book. It is meaty reading. W. A. Y.

Chronic Urethritis of Gonococcic Origin. By J. De Keersmaecker, Chief of Service, Diseases of the Urinary Organs at the Centraalklinic of Antwerp, and J. Veerhoogen, Agrégé at the University of Brussels; Chief of Service, Diseases of the Urinary Organs at the Polyclinique Libre. Translated and edited, with notes, by Ludwig Weiss, M.D., Attending Physician to the Genito-Urinary and Skin Service, German Poliklinik; Dermatologist to the Hebrew Orphan Asylum, New York, etc. New York: William Wood & Co. 1901.

Dr. Weiss has translated the work of Drs. De Keersmaecker and Veerhoogen, two Belgian surgeons who have done much to popularize the work of Oberlander. He has added some original observations on Palpation and Expression of Cowper's Gland, the Prostate and the Seminal Glands, with details on the treatment of Chronic Gonorrhea, Urethral Asepsis and the Question of Gonorrhea and Marriage. The work will be found useful by the general practitioner who wishes to obtain accurate views as to the instruments required in making urethroscopic studies, and also the proper methods of employing the instruments. J. J. C.

Merck's 1901 Manual of the Materia Medica. A ready reference pocket book for the practising physician and surgeon, containing names and chief synonyms, physical form and appearance, solubilities, percentage strength and physiological effects, therapeutic uses, modes of administration and applications, regular and maximum dosage, incompatibles, antidotes, precautionary requirements, etc., etc., of the chemicals and drugs usual in modern medical practice. Compiled from the most recent authoritative sources and published by Merck & Co., New York and Chicago.

To the physician who is desirous of keeping up his knowledge of therapeutics and becoming conversant with the most recent remedies, and their name is well-nigh legion, "Merck's 1901 Manual of the Materia Medica" will be found exceedingly valuable. It contains a wonderful amount of information condensed into very small space, and is so handy as to be easily carried around in the pocket for constant reference.

Laryngeal Phthisis; or, Consumption of the Throat. By Richard Lake, F.R.C.S., Surgeon Laryngologist, North London Hospital for Consumption, etc.; Surgeon, Metropolitan Ear and Throat Hospital. With 36 illustrations. Philadelphia: P. Blakiston's Son & Co. 1901.

This is not a treatise on laryngeal phthisis but rather a record of over 300 cases seen in the wards of the North London Hospital for Consumption. The most prevalent age was found to be from twenty to forty. Males were attacked three times as often as females. Occupation was not found to predispose in any way. A series of examinations were made of cover glass preparations from the noses of fifty tubercular patients, yet in but one case were tubercle bacilli found. It must not be concluded from this that tubercle bacilli are not inhaled; the probability is that the bacilli inhaled are washed into the nasopharynx and enter the system through its mucosa or that of the oropharynx. As far as treatment is concerned, the author deals with local treatment alone. Altogether, this is a very readable and trustworthy little book. J. M. M.

Our Baby: For Mothers and Nurses. By MRS. LANGTON HEWER, diplomée Obstetrical Society, London; late Hospital Ward Sister; author of "Antiseptics, a Hand-Book for Nurses." Seventh edition, revised. Bristol: Jno. Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1901.

This manual has already run through six editions and another now appears, showing that it has had appreciative readers and been found of value to those having the charge of infants. How frequently do physicians come across mothers who astound even their medical attendant through their gross ignorance of the most common rules as to the management of the baby—its feeding, dress, etc. Mrs. Hewer's little book will be found in such cases to fill the bill, and can be furnished for very little money. It will save the doctor frequently a lot of trouble, and cut short the time he has sometimes to spend in his daily visits actually teaching mothers how to manage, feed and clothe their babies.

Her Mountain Lover. By HAMLIN GARLAND. Toronto: The Copp, Clark Co., Limited. 1901.

A day off, the woods, a silver stream, a fishing rod and "Her Mountain Lover" for company spinning his yarn—of early life in Kansas, a devil-me-care cowboy, then a miner among the great hills of Colorado, later a stranger in old London, trying to float his mine. The whole story is amusing yet charming, because of the quaintness of its telling, and the accompanying description of life up in the "high country" this unspoiled child of nature loved so well. The story is told in the vernacular we call slang, but expressive slang that dovetails into the life and surroundings of Jim Mattason of Wagon Wheel Gap, Colorado, with an aptness and freshness all its own. Ask Jim to go with you on your next day's outing and he will reply characteristically, "I'll be on hand, pard, like a sore thumb." W. A. Y.

In the Palace of the King. By F. MARION CRAWFORD. Toronto: The Copp, Clark Co., Limited, publishers.

A love-story of old Madrid, a tale of the love of Don John of Austria, younger brother of King Philip II. of Spain for the beautiful Dolores de Mendoza. The story is full of interest. The jealousy of King Philip, who was disliked and feared by his subjects, for Don John whom they worshipped, is well depicted by the author. The beautiful love-story of Dolores and Don John, at times delightful, sad, or thrilling, the gentle and womanly character of the blind girl Inez and the strategy of the King's jester form the centres of interest around which, amid pomp, vanity, deceit and hardihood, the court life of the Grandees of Spain revolve in this absorbing story. W. A. Y.

Toronto Medical Society.—The following are the officers elected on May 16th for the ensuing year: President, Dr. F. N. G. Starr (accl.); 1st Vice-President, Dr. S. M. Hay; 2nd Vice-President, Dr. G. Silverthorn (accl.); Cor. Sec., Dr. G. D. Porter (accl.); Rec. Sec., Dr. A. G. A. Fletcher (accl.); Treasurer, Dr. G. Carveth (accl.); Council, Drs. A. Primrose, W. J. Wilson and T. S. Webster.

DR. P. E. DOOLITTLE, of Sherbourne and Shuter Streets, has settled down in practice again after an absence in the West of two or three years. The Doctor, with his usual ingenuity and mechanical turn of mind, is flying round on a gasoline bicycle, and, judging from the speed with which he can outstrip the average doctor's horse, he makes good time.