

✻ Contents ✻

	PAGE		PAGE
<b>ORIGINAL ARTICLES—</b>		<b>EDITORIAL ABSTRACTS—</b>	
Report of Surgical Cases with Special Points of Interest . . . . .	57	The Chemical Nature of the Active Principle of the Suprarenal Capsule . . . . .	101
<b>REPORTS OF SOCIETIES:</b>		Treatment of Pneumonia with Large Doses of Digitalis . . . . .	102
Provincial Board of Health . . . . .	61	Hemolium Hydrargy-Iodatum as an Antisyphilitic. —Action of Tamopin. —Toxicity of Ovarian Cystic Fluid . . . . .	103
The Medical Council . . . . .	67	<b>PHYSICIANS' LIBRARY—</b>	
<b>SPECIAL SELECTIONS—</b>		Physiology and Pathology of the Pleura.—Clinical and Bacteriological Experiments with Holo-cain. —Molecular Concentration and Electrical Conductivity. —An Early Symptom of Measles. . . . .	104
Further Observations on the Chemical Nature of the Active Principle of the Suprarenal Capsule . . . . .	68	Orthoform Emulsion.—Substances in the Urine Causing Salivation. —Action of the X-rays Upon the Heart . . . . .	105
Treatment of Tetanus by the Intracerebral Injection of Antitoxin, with Particulars of a Case Treated by this Method Followed by Recovery . . . . .	75	Treatment of Epithelioma of the Face with Methylene Blue.—Have the Tonsils an Internal Secretion?—Action of Glycerine Upon the Pregnant Uterus.—Treatment of Pulmonary Gangrene. . . . .	106
The Report of the Loonis Sanatorium for the Year Ending November 1, 1898 . . . . .	80	Bismutan.—Uro-Diagnosis of Typhoid Fever.—Absorptive Power of the Skin. —Action of the Group N O H. . . . .	107
The Rev. Mrs. Eddy's Apologia . . . . .	83	Antitoxic Power of the Organs Toward Strychnine.—Preventative Action of the Liver Against Phosphorous Poisoning. —Orthoform. —Casanthol . . . . .	108
Treatment of Acne Simplex . . . . .	85	Urea as a Diuretic . . . . .	109
Gastric and Intestinal Antiseptics . . . . .	86	<b>PERSONALS</b> . . . . .	
Antidotal Action of Pulped Nervous Tissue Upon Strychnine . . . . .	87		112
Contributory Negligence . . . . .	88		
Uramic Insanity . . . . .	89		
Uncontrollable Vomiting of Pregnancy . . . . .	90		
Dry Labor . . . . .	91		
The Treatment of Suppuration by Bicarbonate of Soda. —Appendicitis and Renal Colic . . . . .	92		
A Case of Cystinuria . . . . .	93		
The Nature of Diazo-Reaction . . . . .	94		
Auto-Intoxication in Epilepsy . . . . .	95		
Dietetics of Heart Disease.—The Thyroid Therapy . . . . .	96		
The Value of Drawing and Modelling in the Study of Osteology . . . . .	97		
The Anaphrodisiac Action of Thyroidin.—The Effect of Alkalies on Gastric Secretion . . . . .	98		
<b>EDITORIAL—</b>			
Ontario Medical Library . . . . .	99		

**Resinol** (TWO SIZES) 50¢-\$1.00

(℞ Ungt Resinol ʒi—iii)

*A specific for Eczema, Pruritus Ani, and all itching troubles.*

**UNRIVALLED AS AN ANTIPRURITIC, ANTISEPTIC, ANTIPHLOGISTIC, NUTRIENT, ETC.**

**Cascanata** (TWO SIZES) 50¢-\$1.00

(℞ Elix. Cascanata ʒiv—x)

*Indicated in all skin Diseases, chronic Constipation and disorders of Digestion etc.*

**A DESIDERATUM AS A VEGETABLE ALTERATIVE, LAXATIVE TONIC AND ANTACID.**

**Resinol Soap** (PRICE) 25¢

(℞ Sapo Resinol one bar)

**THE BEST SOAP FOR THE SKIN, THE HAIR, SCALP ETC.**

*For sale by all Druggists, or sent on receipt of price.*

~RESINOL CHEMICAL CO.~ BALTIMORE, MD.~

## List of Advertisers

	PAGE		PAGE
Angier Chemical Co.	15	McKesson & Robbins	5
Allen & Hanburys, Limited	Outside Back Cover	McIntosh Battery & Optical Co.	44
Abbey's Effervescent Salt	18	McGill University, Montreal	27
Armour & Company	24	Mulford Co., H. K.	1
Antikamnia Co.	7	Mellier Drug Co.	10
A., T. and Santa Fe Railroad	11		
Bovril Limited	19	New York Polyclinic	39
Breitenbach Company, M. J.	21	New York School of Clinical Medicine	33
Bischoff, C., & Co.	14		
Brand & Co., Limited	8	Oakland Chemical Co.	11
Bausch & Lomb Optical Co.	31	Od Chem. Co.	32
Buffalo University	39	Ontario Vaccine Farm	40
Benger & Co.	7	Ottawa Truss Co.	20
Bovine Company, The	29		
Confederation Life Association	42	Parke, Davis & Co.	Front Cover
Dean, Alf. E.	34	Pulvola Chemical Co.	41
Everett House, New York	40	Phenique Chemical Co., The	4
Elliott Illustrating Co.	40	Pond's Extract	46
Ferrol Company, The	9	Pyne, A. R., M.B.	11
Fairchild Bros. & Foster	2		
Farwell & Rhines	39	Rio Chemical Co.	17
Fellows Syr. Hypophos. Co.	Inside Back Cover	Resinol Chemical Co.	3
Gilmour Bros. & Co	12	St. Paul Association	32
Harvey, The G. F., Co.	46	Scott & Bowne	25
Hamil, Dr. W. E.	44	Thompson, B. & S. H.	23
Ives, R. H., & Co	28		
Jackson Sanatorium	43	Wampole, H. K., & Co	13
Lambert Pharmacal Co.	Inside Front Cover	Warner, Wm. R., & Co.	35, 36, 37, 38
London, Geo. G.	30	Walter's Sanitarium	45
Lyman Sons & Co	22	Willms Co. The Chas.	6
		Wilson, L. A., & Co.	7
		Wood, W. Lloyd	16
		Wabash Railroad	2

# GAROFEN

Formerly Called "Gurania."

## The New Vegetable Analgesic and Antipyretic

To take the place of Morphine Acetanilid and its many compounds. Contains no coal-tar products, nor opium or its alkaloids in any form. Reduces temperature and relieves pain with absolute certainty. Positively no cardiac depressions, debilitating or unpleasant symptoms. Supplied in powder or tablets. Sample, literature and reports mailed free of charge to physicians.

## GAMPHO-PHENIQUE POWDER

Superior to Iodoform.

### The Standard Dry Antiseptic Dressing

Recommended by first physicians of all countries. Sample and literature mailed free of charge to physicians.

Manufactured by \_\_\_\_\_

**Phenique Chemical Co., ST. LOUIS, MO., U.S.A.**

# DOMINION MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

---

---

Vol. XII.

TORONTO, FEBRUARY, 1899.

No. 2.

---

---

## Original Articles

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

---

### REPORT OF SURGICAL CASES WITH SPECIAL POINTS OF INTEREST.

BY DR. WILKINSON, SARNIA.

---

The papers and discussions that have interested me the most at our meetings have been reports of cases in practice. I have in this paper endeavored to exclude cases that did not present some difficulty in diagnosis, surprise upon operation, or some feature that to me seemed to be uncommon. I trust that your free discussion of them will refresh our minds upon the point of differential diagnosis of the troubles they represent. These reports are from my Case-book notes, which were only taken for reference.

CASE I.—F., age 27, married, three years. Well until five years ago. Menstruation regular; lasts ten days; painless; constipated; pain when bowels move; pain in back worse when lying down; pain of a dull, aching character in right ovarian region; onset gradual and increasing; gradual loss of weight and strength; no intra-menstrual discharge. Temperature and pulse normal. *Physical Examination.*—Uterus normal; left tube and ovary normal; right ovary in Douglas's cul-de-sac as large as an egg; tender to the touch; right tube enlarged and tender. Upon opening abdomen and bringing the right tube in sight it was found enlarged about the middle to the size of a walnut. To this was firmly attached the appendix by its

tip. The tube and appendix were removed without separating them. The ovary tied off. Upon examination the enlargement of the tube was found to be an abscess, communicating with the pervious and nearly normal appendix. After recovery, I failed to get a history of abscess formation.

CASE II.—F., age 24, married two years. I first saw this patient in 1890. After a fall from a tree, from which time she suffered from pain in right ovarian region and increasing dysmenorrhoea. In 1895 she was training for a nurse in Grace Hospital, Detroit, while there she had a sudden attack of severe abdominal pain, vomiting and elevation of temperature. A vaginal examination was made there, and fibroma attached to the uterus was diagnosed, and was advised to leave it alone. Some months after I made an examination under anesthesia and found a movable tumor, the size of an orange, apparently attached to the broad ligament on right side. Thought it was fibro-cystic; advised removal, she did not consent. She married and moved away. Has since had irregular acute attacks. In October, 1897, after a very severe attack, she came to me for operation. The tumor was now above the brim in the median line; could be distinctly mapped out, and was as large as a child's head at term. No fluctuation could be discovered. Original diagnosis confirmed. On opening the abdomen the tumor appeared, with a thin sac wall, very tense, which was almost black. The fluid removed was clear. Not a single adhesion. The pedicle was twisted four times on itself. The tumor was an ordinary multilocular ovarian cystoma.

CASE III.—Widow, age 52. Well developed; general health excellent; complains of frequent micturation (every half-hour), only retains half an ounce, with considerable strangury. Has taken ether twice; urethra dilated and caruncles removed without benefit. Examination under anesthesia. Pelvic organs normal. Cystoscopic examination shows: Urethra and base of bladder highly congested. No other pathology. *Diagnosis*.—Rectum sphincter very tense; several large irritable ulcers in lower part. These, after thorough dilatation of the sphincter, were divided across the base, scooped, and a strip of mucous membrane dissected out to the skin from the lower edge of each. Bladder gymnastics darty; before leaving the hospital the bladder would hold seven ounces.

CASE IV.—Farmer, age 36, married. Previous health good. While milking, Saturday morning, November 22nd, 1897, was suddenly seized with pain across lower abdomen and vomiting; tumor over femoral ring. I saw him, in consultation with Dr. Brown, Monday, 5 p.m. General condition good; pain intermittent; reforced above Poupart's ligament; no tenderness. Standing erect or pressure over femoral ring produced vomiting. Pulse, 74°; temp., 99°. Chloroform and toxin produced no effect on a small hard tumor

above the ring that he said had been there for years, and was thought to be an enlarged gland. Surrounding the worst possible; advised removal to the hospital Tuesday morning. He did not vomit or suffer pain on the trip (eight miles). Bowels moved freely after an enema; pulse and temperature normal. Evening everything normal, taking liquid nourishment. Wednesday, at 11.30 a.m., everything normal; bowels moved, wanted something to eat and get up. At 2 p.m. severe pain over lower part of abdomen and vomiting. I was out of town, did not see him until 7.30 p.m. Completely collapsed. Consultation decided that nothing should be done. Died at midnight.



CASE VII.

CASE V.—Female, aged 15. Never menstruated; suffered from partial incontinence of urine for eighteen months, also some backache; not constipated. Six weeks before present attack suffered from chill; acute pain across lower part of abdomen; tenderness on pressure, worse on right side; lasting four days. Temperature,  $103^{\circ}$ ; pulse,  $120^{\circ}$ . On third day when I first saw her all symptoms subsided. Present attack similar, but more severe; pain more intermittent. Temperature  $103^{\circ}$ , pulse  $120^{\circ}$ , when I saw her. Rectal examination revealed tumor, filling the pelvis tense; fluctuation indistinct; external genital organ well formed, but no entrance to vagina could be found. The tumor was two and a half inches from external surface. *Diagnosis*.—Retained menses with absence of vagina. Had her removed to the hospital and prepared for immediate operation. Dissected a canal between urethra and rectum; punctured sac with sharp-pointed scissors and enlarged the opening with pair of forceps; about a pint of dark

fluid escaped ; irrigated the cavity with boracic acid solution ; packed canal and cavity with iodoform gauze ; could not bring sac wall down to external mucous membrane ; used Symes' plugs for months ; menstruation regular and painless until last time. What can be done to keep this canal open ?

CASE VI.—Female, married, age 24. This patient had a cyst of broad ligament removed by me some months ago by an easy operation. Now complains of pain on opposite side, both tube and ovary enlarged, thought to be of gonorrhoeal origin. Advised removal. On making the incision, before meeting with the peritoneum, a sac with a very thin wall presented, which ruptured during manipulation, and about ten ounces of clear fluid escaped. I thought it was a cyst of urachus ; packed with iodoform gauze. When the first packing was removed urine escaped from the opening, and continued to do so for three weeks, when fistula closed. Only four ounces of urine came through urethra for the first week or ten days, gradually increasing, until normal quantity was passed. Fistula healed in three weeks. Examination four months after. No sign of sac to be found ; pain and tenderness in region of tube and ovary very slight, and not constant.

CASE VII.—Female, age 12. The previous history of this case is incomplete. From her aunt I gather that there was some malformation of anal region at birth ; never had a natural passage. Incontinence of feces, always more or less, passing through vagina ; incontinence of urine. Twenty-two months ago she had an operation, from which she did not derive any benefit. Present condition : Poorly nourished, with an enormous abdomen ; weight, 85 pounds ; circumference of abdomen, 37 inches ; general dullness. While taking the anesthetic the outline of the bladder could be seen extending 9 inches above the pubes, it contained 18 ounces of urine. Vaginal examination shows a fistula communicating with the rectum, half an inch in diameter,  $1\frac{1}{2}$  inches from outlet. Rectal examination shows the whole pelvis filled with fresh matter, also the whole colon. The sphincter, which was very tense, was well dilated. At this sitting 20 inches in all was removed. Ten days after, under anesthesia, with Kelley's long colon tube and irrigation the measurement of the abdomen was reduced to 19 inches. Since then the bowels move with salines, mostly through the bowel ; catheter used every 4 hours ; 60 ounces of normal urine daily. At another sitting I purpose dividing recto-vaginal septum and repairing the fistula. I show you a photo of this, I think, unique case.

## Reports of Societies

---

### PROVINCIAL BOARD OF HEALTH.

---

The Provincial Board of Health assembled for its quarterly meeting at the office of the Secretary, February 3rd, Dr. Macdonald, Hamilton, presiding. There were also present Drs. Kitchen, St. George; Vaux, Brockville; Cassidy, Toronto, and Bryce, Secretary. A large amount of correspondence was read and acted upon. The request of the School Trustees of Horton Township, Renfrew County, for an analysis of the water supply was concurred in.

The medical Inspector of the district reported that the camps of the Victoria Harbor Lumber Company are now in good condition and free from disease.

The opinion of the Provincial Law Clerk was read, stating that the act respecting contagious diseases empowers Local Boards of Health to require physicians to report cases of tuberculosis to the Health Officer.

The Secretary reported upon the outbreak of smallpox in the Irish Creek district, and also that no new cases have been reported, but that he had that day received advices that four new cases had developed in St. Telesphore, Que., just across the river from Hawkesbury, in the same house from which a case had previously been reported.

The health authorities of Madoc raised an interesting question in connection with the recent outbreak of diphtheria among the employees at the Gilmore lumber camp. One of the men went home, carrying the infection with him, and the township was put to an expense of \$225 in buying food, etc., for the sick people. The municipality wanted to know whether the lumber company could not be compelled to recoup the township for this expenditure. This proved a knotty question, and the Secretary was instructed to send a copy of the health regulations to the municipal authorities.

### REPORT ON EPIDEMICS.

At the afternoon session the quarterly report on epidemics was adopted. From the report it is gathered that the past quarter has not been marked by any special prevalence of contagious disease in the Province, dealt with under the public health act, although the remarkable climatic changes of the past month have been productive of an abnormal prevalence of diseases of the respiratory tract, and notably of influenza, showing in many instances a

markedly infectious character. Such influences have similarly tended to an increase in diphtheria, of which the monthly reports show fifty-one deaths, or a rate rather above the average for the year.

Typhoid fever has shown a notable decrease in deaths, there having been in December only twenty-one deaths. Reports from Kaladar Township have come to hand telling of a notable prevalence of the disease for several months past in a rural district amongst poor settlers, and points to the obvious need of some means of systematic investigation and control superior to that possible in a township with a population of 360 ratepayers and an assessment of \$73,000, with a tax of 19 mills on the dollar. Such outbreaks illustrate the absolute necessity for a trained county officer, who could devote the necessary time to the control of such an outbreak.

Scarlatina shows a low incidence during the quarter.

Smallpox is, however, again present in the Province, while its prevalence in surrounding States, with its appearance in immigrants from a European port, and its presence in Quebec, Manitoba and British Columbia, all call for the prompt action of the Local Boards of the Province in preparing for its approach by at once taking steps for a general vaccination of our people, who have greatly neglected this precaution since the great Montreal epidemic in 1885.

A statement is given showing that during the past three months there have been eleven cases of smallpox reported in Ontario, of which eight have recovered, one died and two are still sick. The two cases which are still under treatment are at North Colchester and East Hawkesbury. The report continues:—

“The scientific progress in the last few years in the preparation of aseptic glycerinated cap-vaccine lymph has made great strides. The Local Government Board of England has instructed public vaccinators to use glycerinated calf lymph, in preference to humanized lymph. Health authorities of New York, Chicago and other places are preparing and using it. Large private firms have it on the market, and it is advised that the proprietor of the Ontario vaccine farm be requested to arrange for the preparation of lymph in a similar manner. The splendid results of such glycerinated preparations in successful vaccinations, and the absence of suppuration when the operation is carefully performed, encourage the hope that any apprehension on the part of any person as to the results of vaccination may be wholly removed.

“What the unvaccinated are exposed to is seen in the unfortunate case of the young man in Walford Township who died on January 28th. The Medical Health Officer reports the receipt by



deceased of a letter from a brother in British Columbia, and written apparently from a house wherein, as the letter states, "his employer had just died of smallpox." No other source of contagion seems possible, so far as reports go. Owing to delay of six days before the nature of the disease was discovered, others of the family are likely to take smallpox, neighbors exposed, and there is almost a certainty of a number of more cases occurring. With prompt action by the local authorities, there is reason to hope the outbreak will be limited. There will, however, be a serious expense to the municipality involved, yet if municipal authorities and private persons continue to neglect vaccination such expenses may be expected.

"Owing to cases reported in East Hawkesbury Township, in Prescott, contiguous to the Quebec County of Soulanges, where several cases exist, a medical inspector of your Board has been despatched to visit the districts where cases are reported and to take steps to have the local authorities active in the suppression of the outbreak. What further steps may be deemed necessary to be taken in view of the present situation will be for your Board to determine.

#### TUBERCULOSIS.

"The past year has been marked by remarkable activity in different countries, as well as in the Province, in the progress of the movement for suppressing the prevalence of tuberculosis. This has taken two directions, the one, the establishment of sanatoria for treatment and notification of cases; and the second has been the renewal of the crusade against milk and its products, which may carry the germs of tuberculosis.

"English public opinion so conservative, so slow to be aroused to action, yet so characteristically practical when aroused, has during the past year—years after France, Germany and Denmark had instituted practical measures for dealing with the disease—developed an activity positively surprising. By far the most advanced in its systematic municipal sanitation—which in England has in thirty years caused the mortality from consumption to be reduced 50 per cent., and has resulted in a death rate in that densely-populated country of but 1.3 in the 1,000, or lower in 1896 than Ontario in 1897—the English people, led by his Royal Highness the Prince of Wales, have declared that tuberculosis is a disease which can be prevented, and, therefore, must be, and a national association, with him at its head, has been formed to aid municipal establishment of local sanatoria for its treatment. But, more than this, they have, by a royal commission, based on experimental evidence, declared that the dairy is a fruitful source of this disease; and experimenters are there daily accumulating further evidence of its truth.

"The most recent of such results are those published in the *Lancet* of January 14th, 1899, giving the experiments instituted by Prof. H. H. Karthrack, professor of pathology, Cambridge University, and who had died almost on the completion of the work. The investigation was begun in April, 1898, as to the effects of the milk supply sent daily to the different colleges of that city. Daily samples were taken directly from the milk cans of vendors, and from half to a drachm of the creamy portion and of the sediment were injected into the groin of guinea pigs, each into a separate animal. Microscopic examinations were also made of each sample. Summed up, the following results were obtained: Of the ninety guinea pigs inoculated twenty-three died, or 25.05 per cent.; of these thirteen were from the creamy layer and ten from the sediment. Of the sixteen dairies examined, all supplying mixed milk, nine supplied milk which caused tuberculosis. The report states it is therefore not unreasonable to regard these dairies as a grave source of danger.

"The same number of the *Lancet*, in its Berlin correspondence, gives the latest results of experiments at the Imperial Hygienic Institute on tubercle bacilli in butter. Dr. Obermuller found bacilli in each of fourteen samples supplied by the same tradesmen. Dr. Hermann found them in 50 per cent. of ten samples from three shops. Dr. Peter, of the Imperial Health office, found them in 32.3 per cent. of ten samples from different shops. Dr. Lydia Rabinowitch found in one set of samples 70 per cent., and in another set from the same shop 100 per cent. containing bacilli. All the animals inoculated with this butter produced typical symptoms of tuberculosis.

"It was remarked that the most numerous and virulent samples were from the principal shop in Berlin.

"Remembering the long repeated and strenuous endeavors of this Board to point out to the public and to local health authorities the danger from infected milk products, remembering that the actual deaths in Ontario from diseases returned as tuberculosis have reached in 1897 for the first time 3,000, or 3,154 exactly, it seems regrettable in the extreme that after all efforts put forth but two, or at the most three, of our 777 municipalities have attempted to deal with the question of milk from tuberculized cows. And is it to be wondered at, when we see one of the leading dailies, which wields so potent an influence upon public opinion, publishing twice within the past few months articles on the "Tuberculosis Scare," making statements showing apparently a marvellous ignorance of facts, which have been abundantly illustrated in a hundred laboratories and by the telltale statistics of the registration returns of every country and large city in the world?

"Now we hold largely the cheese market of Britain, and hope

to gain the butter market. But if we are to maintain our present position, if we are to gain what we are longing to obtain, surely those who are seemingly prepared to close their eyes to what affects the lives of our own people will begin to see that the interests of true commercial enterprise demand that we send commercial products to foreign countries with such an assured wholesomeness that there will be no danger of our losing what it has taken such great pains to obtain.

"In the report of Dr. McEachran, published in August, 1898, by authority of the Minister of Agriculture, Ottawa, the magnificent commercial results of the scientific production of milk in Berlin, and of the Milk Supply Company of Copenhagen are illustrated, and if it were necessary the results of similar methods in use on this continent could be quoted to amply indicate that any attempt at reactionary methods, whether private, municipal or governmental, in this work, based upon science, must to-day end disastrously and in commercial loss."

#### SANATORIA FOR CONSUMPTIVES.

Referring to the remarkable development of the problem within the last year in England and on the continent, the report pointed out how the development in Germany had taken place in consequence of the practical use being made of the consumptive sanatoria, by the workmen's insurance societies. A brief sketch of the societies was given, in which it was shown that in them \$7,300,000 was spent as the cost of medical attendance and medicine in a single year, and that \$21,300,000 was the actual cost of sickness paid out in sick benefits by these associations. The associations, having observed how in the first sanatoria early consumptive cases had been cured, seized the idea that if the disease can be cured it is better for their funds that they pay the cost of maintaining sick work-people insured by them in these sanatoria than to pay death claims. So successful has the treatment proved that, as the report states, over \$1,000,000 was spent in 1898 alone for the construction of sanatoria and maintenance of patients in them by the insurance associations alone. The report of one of the largest of these on 1,541 patients treated shows that general improvement took place in 85 per cent. and complete restoration of working capacity in 71.8 per cent. The time which these companies are required to maintain a sick patient is a minimum of thirteen weeks. Their physicians thus are required to report consumptives at the earliest moment they are seen. The report urges that if such results are obtainable in Germany equally good results ought to be obtained for the thousands insured in our friendly and other insurance societies in Ontario, where, as the reports state, probably more than a third of all deaths in them are due to consumption.

At the session on the 1st. the report of the Health Officer of the Sudbury district stated that diphtheria had broken out on January 30 at Holland and Emory lumber camp, and that prompt action had been taken to suppress the disease.

Renewed complaints were received from Oakville in reference to the location of slaughter-houses. Similar complaints from Uxbridge were also repeated. The authorities of Gloucester Township reported that arrangements had been made for general vaccination, and Dr. Macdonald, of Alexandra, Glengary County, recommended general vaccination. A report from Irish Creek, Walford Township, stated that another member of the Brown family was probably down with smallpox.

The plans of the proposed sewer in Bentinck Township were approved of, subject to the provisos that the Local Board of Health of Bentinck Township signify their consent to the Knetchel Furniture Company for the construction of the sewers; that the sewer be discharged into the Saugeen River direct by a till sewer; that the Knetchel Company agree to assume any responsibility which may arise from the pollution of the Saugeen River, and that the Local Board and the Knetchel Company agree to adopt such other method of sewage disposal as may be approved by the Provincial Board should necessity arise.

The Secretary was instructed to prepare a circular to Local Boards of Health in the Province urging the need of providing for general vaccination of school children and other unvaccinated persons.

The Chairman, Dr. J. Macdonald, of Hamilton, presented his annual address, in which he referred with approval to the fact that the membership was unchanged owing to the advantage which arises from continuity of policy. In opening the year it is a pleasure, the chairman said, to say that the health of the country has been good during the year which has passed. No epidemic has appeared, nor have infectious diseases obtained a footing in the land. Some of the latter kind have appeared, as appear they will from time to time, but wherever such have occurred they have been promptly suppressed by measures directed by the active secretary of the Board. Diseases of that nature are seen tabulated in the monthly reports, but the cases have not been so numerous as to enable us to say that they have had any prevalence. Here to, however, an exception should be made with respect to our old enemy, tuberculosis. It is always present, a persistent life destroyer, and during the year past has been true to its history. It has cost the country more lives than all the other diseases reported when added together. The chairman, in discussing the causes and remedy for tuberculosis, referred to the action of the Board upon Dr. Cassidy's motion, the purpose of which was that

the Board declare phthisis to be a notifiable disease, and expressed regret that, while the necessity for carrying out of such decision is urgent, owing to public sentiment it will need much time to reconcile the majority to the decision. The other mode of separation of the tubercular from the healthy by means of consumptive hospitals was approved.

At the afternoon session the Board discussed a number of proposed amendments to the Health Act, relating to the appointment of County Medical Health Officers. The matter was referred to the Committee on Legislation, to take charge of the matter and report the matter to the next quarterly meeting.

The legislation contemplated is an addition to Sub-section 44 of the Health Act, providing that within a certain period the present Township Health Officers will be replaced by a single county officer for the area similar to that now under the supervision of the County School Inspector, that such Medical Health Officer shall not engage in private practice, thus removing one of the chief objections to the present system, by which one rival practitioner is placed over his competitor in the capacity of Medical Health Officer. Such county officer will be required to possess definite qualifications by examination in medicine, and shall be prepared to examine, chemically and bacteriologically, water, milk, diseased tissues, etc., for the benefit of practitioners of his county. He will also be required to perform the duties now supposed to be performed by the Medical Health Officers nominally appointed in most cases by the Township Council. Provision is also made for fixity of tenure of office, and the officer would be charged with the duty of examining into the injurious effects of microbe organisms upon butter and cheese products. It is proposed that towns up to a certain limit may unite with the townships in the appointment of a county officer.

---

### THE MEDICAL COUNCIL.

---

The election of representatives to the Medical Council resulted in the following being elected: There were only two contests among the territorial representatives, one of which was between Dr. Armour, of St. Catharines, and Dr. Glasgow, of Welland, in which Dr. Glasgow was elected; the other one was between Dr. Crimmon, of Palermo, and Dr. Stuart, of Milton, the latter of whom was elected.

Territorial representatives: Drs. J. L. Bray, Chatham; L. Brock, Guelph; W. W. Dickson, Pembroke; S. H. Glasgow, Welland; J. Hanly, Midland; J. Henry, Orangeville; J. W.

Lane, Mallorytown; A. A. Macdonald, Toronto; J. W. McLaughlin, Bowmanville; R. W. Powell, Ottawa; J. A. Robertson, Stratford; W. F. Roome, London; J. H. Sangster, Port Perry; P. Stuart, Milton; T. H. Thornton, Consecon; J. A. Williams, Ingersoll; E. J. Barrick, Toronto.

Collegiate: Drs. W. Britton, Toronto; W. J. Douglas, Cobourg; W. B. Geikie, Toronto; H. S. Griffin, Hamilton; V. H. Moore, Brockville; M. Sullivan (Senator), Kingston; James Thorburn, Toronto.

Homeopathic: Drs. C. L. T. Campbell, London; W. J. H. Emory, Toronto; G. Henderson, Strathroy; G. Logan, Ottawa; L. Luton, St. Thomas.

### Special Selections

## FURTHER OBSERVATIONS ON THE CHEMICAL NATURE OF THE ACTIVE PRINCIPLE OF THE SUPRARENAL CAPSULE.

BY JOHN J. ABEL, M.D.

[From the Pharmacological Laboratory of the Johns Hopkins University.]

In my first paper on the chemistry of the suprarenal capsules, in which I reported in detail on researches carried out with the help of Dr. A. C. Crawford, I was able to show that the bio-pressure raising constituent can be separated from aqueous extracts of the capsules in the form of a benzoate, and that this remarkable substance is not, as has been maintained, either pyrocatechin or an immediate derivative of it, and v. Fürth,\* in an interesting paper published after, announces the same conclusion. We also gave as our opinion that this substance is to be classed with the alkaloids, founding this opinion on facts stated at length in our paper.

It is my purpose to give in the following brief paper an outline only of certain new observations made in the past year on this chromogenic substance or blood-pressure raising constituent. †

The extract used had been prepared with warm water slightly

\* Hoppe-Seyler's Zeitschr. f. Physiol. Chem., vol. 24, p. 142.

† It is a pleasant duty to acknowledge that this research would have been impossible but for the liberality of Messrs. P. D. Armour & Co., of Chicago, who have supplied me with large quantities of a concentrated aqueous extract of the suprarenals of the beef prepared according to my direction. My thanks are also due to Prof. A. G. Manns, chief chemist of the firm, for the care he has taken in preparing these solutions and for the interest he has taken in the scientific aspects of the subject.

acidulated with sulphuric acid, and it was then concentrated in vacuo until the extract from 50 kg. of fresh suprarenals was reduced in volume to about 10 litres. This condensed extract was then heated to 80°, the coagulated proteids were filtered off and the clear filtrate benzoated in fractional portions. It was found to be unnecessary to remove the proteids entirely.

The crudy, sticky mixture thus obtained, which consisted of the benzoates of our chromogen, of inosit, possibly also of carbohydrates, creatine and other substances, was then washed thoroughly with water and then dissolved as far as possible in warm glacial acetic acid. A considerable residue remained undissolved. The acetic acid solution was poured into much ether, and again a great deal of material was precipitated. The acid ether solution was first repeatedly shaken out with water, causing a further deposition of resinous matter, and then with a solution of sodium hydrate until all the acetic acid was removed and only a clear but slightly colored ether solution of a benzoate remained. These repeated washings caused copious deposits to fall out.

The ether solution was again washed with water and then once or twice with a 10 per cent. solution of sulphuric acid, followed with water. This washing with acid was now discontinued, as it caused the benzoate of the chromogen to fall out in the form of a sticky resin.

It will be seen that by the above processes a number of foreign benzoates are removed; thus the benzoate of inosit being insoluble in glacial acetic acid and that of grape sugar in ether.

When the benzoate of the chromogen had been treated as stated the ether was removed by distillation, and a yellowish, sticky benzoate remained, which became brittle when allowed to dry in the air in thin layers. By boiling its alcoholic solution with animal charcoal, further purification was effected, so that when small quantities of this alcoholic solution were allowed to evaporate bunches of prismatic crystals were deposited. Many different solvents have been tried, but from none does it crystallize with enough difficulty to leave a mother-liquor.

Nevertheless, I have been able to learn something as to the composition and nature of the chromogen, the assumed blood-pressure raising constituent. In order to isolate this substance, the benzoate as obtained from the washed ether solution was decomposed with water in an autoclave under a pressure of 8-12 atmospheres. A clear, slightly straw-colored solution is thus obtained, which, when freed from benzoic acid and from a certain amount of a black resin which is deposited here as well as in other methods of decomposing the benzoate, gives all the well-known color and reduction tests of a fresh aqueous solution of the glands, with one difference, which is that the addition of a little ammonia

and iodine water no longer gives the characteristic rose-pink color, but, instead, a vivid green. In all other respects the chromogen appears to be unaltered. A little ammonia, however, is set free during the hydrolitic decomposition just described, but whether this is derived from our substance or from some benzoate still contaminating the benzoate of the chromogen cannot as yet be stated.

When all the benzoic acid has been removed from the solution of the benzoyl product as taken from the autoclave, the cautious addition of very dilute ammonia, drop by drop, causes a copious precipitation of a substance which falls out in a flocculent precipitate much as does casein when precipitated from milk with acetic acid. The precipitate rapidly darkens and must be removed with the help of a suction filter as rapidly as possible.

It is washed with a little water, then with cold absolute alcohol and ether, and immediately ground up in agate mortars while it is still moist with ether. On drying it becomes a light greyish powder. This is the free chromogen with such slight modification as has occurred during the hydrolisis of its benzoate. When dry it is almost insoluble in water as also in a whole series of organic solvents; it is very soluble in warm dilute acids, in cold glacial acetic acid and in acetic anhydride. Dilute solutions in slightly acidulated water give an intense green color with ferric chloride or with ammonia, and they reduce ammoniacal silver solutions. Such solutions, exposed to the air, gradually deposit a brown precipitate, and this goes on until but little of the chromogen is left.

The behaviour of the substance toward the halogens, which all precipitate it from its solutions, and toward the numerous alkaloidal reagents, I hope to report on at some future date. I shall only say here that a little of the dried chromogen obtained by breaking up the benzoyl product with acids, as described in my first paper, and which still gives the rose-pink color with ammonia and iodine water, strikes a rich plum color when treated with a drop of sulphuric acid or with Mandelin's reagent, reminding one of the effect of similar tests on strychnine. The chromogen, as derived from its benzoate by hydrolisis in the autoclave, does not give this color, but an olive-green followed by pink, which gives place to dirty hues.

Strong alkalies decompose the substance, boiling it with alcoholic solutions of potassium hydrate and chloroform brings out the nauseating odor of a carbylamine. On attempting to isolate this volatile substance by distillation, it was found to be decomposed, and on again treating the distillate with alcoholic potash and chloroform, the carbylamine was regenerated, thus showing that a primary amine had been split off when the chromogen was treated in this way.



SKATOL: A DECOMPOSITION PRODUCT OF THE  
CHROMOGEN.

On fusing the substance with powdered potassium hydrate and then diluting with water, the penetrating odor of skatol rises from the solution. When this solution is shaken out with ether and the ether allowed to evaporate, little globules remain having an intensely foecal odor, and when these are dissolved in concentrated hydrochloric acid the solution at once takes on the fine characteristic pink color always seen when even small quantities of skatol are thus treated.

An alcoholic solution of these globules gives to a pine silver, moistened with hydrochloric acid, a rich dark red color; a solution in benzol to which picric acid in benzol is added immediately deposits a picrate, not in crystals but in the form of reddish droplets, and an aqueous solution treated with sulphuric acid and potassium nitrite gives the whitish turbidity seen when skatol is similarly treated. Salkowsky's reaction was also obtained, though imperfectly, as the production of intense colors in this test demands more substance than was left at my disposal.

The characteristic odor of this decomposition product, together with its chemical reactions, would make it appear that we have either skatol itself or one of the isomeric indols.

Some importance must be attached to this discovery, since, taken with the various reactions of the chromogen, the results of the elementary analyses and such facts that dry distillation yields benzoic acid, amines, etc., and heating with zinc dust yields pyrrol, it clearly enables us to classify the chromogen, in a preliminary way at least, among complex aromatic bases not very dissimilar from the alkaloids. The results of combustion analyses show that its empirical formula is  $C_{17}H_{15}NO_4$ , thus approaching in elementary composition some of the alkaloids.

The composition of pseudomorphine, for example, is represented by  $C_{17}H_{19}NO_4$ , that of cocaine by  $C_{17}H_{21}NO_4$ , that of sanguinarine by  $C_{20}H_{15}NO_4$ , and that of benzylidene collidine dicarboxylic acid by  $C_{17}H_{15}NO_4$ , and among these alkaloids sanguinarine is noteworthy for its power to raise the blood pressure.\*

In this connection, too, it is of interest to note that Stöhr† has shown that skatol is liberated when strychnine is heated with calcium oxid, and that Hoffmann and Königs‡ have obtained indol from tetrahydroquinoline by passing its vapor through a tube heated to redness.

---

\* H. Meyer, Arch. f. exp. Pathol. u. Pharmakol., XXIX, 426.

† Berichte d. Deutsch. chem. Gesellsch., vol. 20, p. 1108.

‡ Ibid., vol. 16, p. 738.

## ANALYTICAL RESULTS.

The results of the elementary analyses are as follows:

0.145 gm. of substance, dried in vacuo at  $100^{\circ}$  C, gave 0.3675 gm. of  $\text{CO}_2$  and 0.0684 of  $\text{H}_2\text{O}$  or 69.12% C and 5.24% H.

A second analysis made with 0.1862 gm. of substance, prepared at a different time and with slight modifications, gave 0.473 gm. of  $\text{CO}_2$  and 0.0102 gm. of  $\text{H}_2\text{O}$  or 69.28% C and 6.09% H.

A nitrogen estimation, using substance prepared at the same time as that used in the second carbon and hydrogen analysis, gave the following results:

0.1784 gm. of substance gave 7.8 cc. of N at  $21^{\circ}$  C, and under a barometric pressure of 761 mm. of mercury. In this estimation, therefore, the N amounts to 5%.

Putting these results in tabular form, we have

I.	II.
C = 69.12	69.28
H = 5.24	6.09
N =	5.00

Calculating for an empirical formula, we find that the expression  $\text{C}_{17}\text{H}_{15}\text{NO}_4$  meets the requirements, since theory demands for

C	68.68
H	5.05
N	4.71

The agreement between the percentages demanded by this formula and the results obtained by analysis is as close as could be expected, since we are dealing with an amorphous substance and one in which the percentage of both H and N is very low.

In all of the above analyses a correction of 9.2 per cent. in the weight of substance given is made for ash. In spite of the fact that the benzoate itself is entirely free of ash, the amorphous chromogen obtained from it has carried down much mineral matter derived from the utensils used in the cleavage experiments and in subsequent manipulations.

The acetate of the new substance was also prepared and analyzed. The results thus far obtained are not fully in accord with the above formula, but this is due to the fact that the acetate decomposes during drying at  $100^{\circ}$  C. in vacuo. Acetic acid appears to be given off under these circumstances, and thus the C, H and N content is much changed from that required by the formula thus given. I do not doubt that when analyses are made with the avoidance of this loss the results will be concordant.

Not being able to repeat this part of the work at present, owing to lack of material, I here append the results of analyses

made with an acetate which was constantly losing weight. The acetate was prepared by dissolving the free base in glacial acetic acid, and allowing this acid solution to flow in a thin stream into ether. The acetate is at once completely precipitated and may readily be collected, washed and dried. The percentages obtained on analyses were:

$$C = 58.16$$

$$H = 5.82$$

$$N = 5.04$$

whereas the diacetate  $C_{17}H_{15}NO_4(C_2H_4O_2)_2$  requires

$$C = 60.43$$

$$H = 5.51$$

$$N = 3.36$$

The analytic data for the above percentages of C, H and N are as follows:

0.153 gm. of acetate gave 0.3263 gm. of  $CO_2$  and 0.0802 gm. of  $H_2O$ ; 0.2046 gm. of the same material gave 9.1 cc. of N at  $20.5^\circ C.$  and under a barometric pressure of 754.6 mm. of mercury.

The method of preparation of the acetate does not tend to diminish the ash, and fusing the substance on platinum foil showed its presence in at least as large amounts as in the free base. In the absence of direct estimates for ash, it was thought fair to assume its presence to the extent of at least 10 per cent., and the weights here given have been corrected in accordance with this assumption.

I have already remarked that an analysis of the benzoate of the chromogen as thus far prepared showed it to contain  $C = 72.54\%$ ,  $H = 5.54\%$ ,  $N = 3.46\%$ .

The analytic data are as follows:

0.2966 gm. of substance dried in vacuo at  $80^\circ C.$  gave 0.78895 gm. of  $CO_2$  and 0.14785 gm. of  $H_2O$ . 0.29656 gm. of the same material gave 8.7 cc. of N at  $18.25^\circ C.$  and under a barometric pressure of 760 mm. of mercury.

The monobenzoate of  $C_{17}H_{15}NO_4$  is  $C_{17}H_{14}NO_4 \cdot CO \cdot C_6H_5$  and requires that

$$C = 71.82\%$$

$$H = 4.74\%$$

$$N = 3.49\%$$

whereas our analysis gives

$$C = 72.54$$

$$H = 5.54$$

$$N = 3.46$$

This discrepancy in the carbon and hydrogen percentages is readily accounted for as the amorphous resinous benzoate analyzed is exceedingly difficult to dry to constancy of weight, and is,

furthermore, perhaps not quite free from foreign benzoates. The results of analyses, nevertheless, point to the conclusion that we have the monobenzoate of the new base before us.

The above-named methods of isolating the active principle are far from being as satisfactory as could be desired. The resinous substance found in the autoclave on decomposing the benzoyl product always retains a considerable amount of the base. This may be extracted with dilute sulphuric acid and may then be precipitated with ammonia. This precipitation is, however, incomplete—a considerable amount of the base always remaining in solution. A considerable loss also occurs during the washing of the free base with water and alcohol, the latter agent especially dissolves considerable of the moist precipitate. The high ash content of the free base and of the acetate is also a most undesirable feature of the methods above described. Had there not been a tolerably fair agreement in the analytical results for the free base, its benzoate and acetate, with good reasons for the divergence in the case of the acetate, I should have hesitated to publish my results at this time.

I have lately found in sodium picrate a good agent for the complete precipitation of the base from its solution in dilute mineral acids. The picrate is fairly soluble in a number of organic solvents, as, for example, alcohol, acetic ether and methylal, and may be precipitated from its solutions in these agents by the addition of much ether. On redissolving and reprecipitating, a yellow picrate is obtained which leaves no ash when burned on platinum foil, and which, I believe, can be made to crystallize. It is my intention to give, in the near future, a more detailed description of the properties of this picrate with analyses and molecular weight determinations.

#### SUMMARY.

To summarize the results of this investigation in a few words: The active principle of the suprarenal capsule has been isolated in the form of a powder of a light grey to brownish color, whose percentage composition is expressed by the formula  $C_{17}H_{15}NO_4$ . A primary amine and a methylindol are easily split off from its molecule by treatment with powdered alkalis.

Should molecular weight determinations prove that the above formula correctly expresses the molecular weight of the new base, it will be seen that its molecule can contain only one substituted benzene ring in addition to the nitrogenous complex of atoms from which the skatol is derived. Oxidation and substitution experiments are, however, still necessary before more definite statements can be made as to the constitution of this compound.

In its native state, as found in the suprarenal capsule, this

substance differs by one chemical reaction only from its state as described in this paper. Chemically considered, the difference in composition between its native state and as here described must be very slight. And yet this difference which is just marked enough to give a greater stability to the substance is also great enough, apparently, to deprive it of its power to raise the blood-pressure, for, in the physiological experiments, thus far made, small quantities of the new base were found to be inactive in this respect.

I wish to express my thanks to my assistant, Dr. Walter Jones, for the valuable assistance rendered in making the analyses recorded in this paper.

---

## TREATMENT OF TETANUS BY THE INTRACEREBRAL INJECTION OF ANTITOXIN, WITH PARTICULARS OF A CASE TREATED BY THIS METHOD FOLLOWED BY RECOVERY.

BY D. SEMPLE, M.D.

Major, Royal Army Medical Corps; Assistant Professor of Pathology, Army Medical School, Netley.

---

### TETANUS TOXIN AND ANTITOXIN.

It is now a well-established fact that tetanus is a disease caused by the absorption of a toxin elaborated by the tetanus bacillus. The bacteria which produce this toxin are confined to the inner or outer surfaces of the body, site of inoculation, or devitalised tissues. Here they multiply and produce a very strong toxin, which after absorption is taken up by the cells of the central nervous system, is fixed there, and gives rise to the spasms which characterize the disease. All the symptoms of tetanus can be produced in susceptible animals by hypodermic injections of toxin free from bacilli.

In a case of tetanus the toxin reaches the central nervous system from the seat of its production by two paths: one part directly by the nerves, and on this account contractions may occur near the site of absorption before the general contractions set in. The other part reaches the central nervous system by the blood stream, and when it gets there it is, after a time, seized upon and fixed by the nerve cells in the same way that aniline basic dye is fixed by a cell nucleus or a bacterium. This fixation of the toxin by the central nerve cells takes place in the spinal cord at an earlier period of the disease than it does in the higher nerve centres.

It appears that there exists a strong affinity between tetanus toxin and the cells of the brain and spinal cord. This affinity is easily manifested when they are mixed together *in vitro*.

Wassermann was the first to show that an emulsion of the brain or spinal cord of a susceptible animal, when mixed with tetanus toxin and injected under the skin of a guinea-pig (which is a very susceptible animal), produces no symptoms of tetanus, and the animal remains well. A control guinea-pig receiving the same amount of toxin *minus* the emulsion of brain or spinal cord dies with a typical tetanus. This experiment demonstrates that tetanus toxin is a neurotropic poison—that is, a poison which has a specific affinity for, and joins itself on to, nervous elements.

If a healthy animal, such as a rabbit, receives tetanus antitoxin hypodermically, it acquires passive immunity, and can resist large doses of tetanus toxin given subcutaneously or intravenously without any ill effects. In this case the tetanus toxin is neutralised as soon as it gets into the circulation by the antitoxin which is already there, and never reaches the central nerve cells at all. The animal is not, however, immune to a very small amount of tetanus toxin injected into the brain substance; but, on the contrary, after this operation, it readily develops cerebral tetanus and dies. It is evident from this experiment that tetanus antitoxin, whether given hypodermically or intravenously, does not immunise the brain cells.

An animal suffering from tetanus cannot, as a rule, be cured by giving antitoxin in the usual way—that is, hypodermically. The toxin has already been fixed in the centre nerve cells, and these cells evidently do not take up the antitoxin from the blood, and are not influenced by it. In this case the toxin may invade new areas by spreading itself from nerve cell to nerve cell under cover of the antidote. On the other hand, animals in the early stages of tetanus can be easily cured by the intracerebral injection of a small quantity of antitoxin.

With the help of these facts, which are the outcome of recent experiments by MM. Roux and Borrel,<sup>1</sup> on tetanus in animals (and which I have been able to verify at Netley and at the Pasteur Institute, Paris), we are in a position to treat tetanus in man on a more scientific basis than formerly.

If tetanus is suspected, but symptoms have not yet appeared, antitoxin given hypodermically, or into the circulation, confers passive immunity, and is a certain and efficacious preventive. If symptoms have already appeared, it almost always fails to cure or to prevent the spread of the disease when given hypodermically,

---

1. E. Roux et A. Borrel, *Tétanos Cérébral et Immunité contre le Tétanos*, *Annales de l'Institut Pasteur*, April, 1898.

for the central nervous elements have not the same affinity for the antitoxin that they have for the toxin. On this account the toxin already fixed in the lower nerve centres does not meet with the antitoxin which is circulating in the blood, and the higher nerve centres, which have not as yet taken up the toxin, are not immunised against a spread of the toxin from the lower centres, so the disease takes its course.

#### INTRACEREBRAL INJECTION.

The only way to convey immunity to the vital parts of the nerve centres and to prevent their nerve cells from fixing the toxin, is to inject the antitoxin into the substance of the brain. If this is done early in the disease, while only the lower nerve centres are as yet affected, and before the higher nerve centres have become affected, the progress of the disease is arrested—the symptoms already present, which depend upon fixation of the toxin in the lower centres, remain for some time and then disappear, the toxin ceases to invade new territories and recovery is likely to be the result.

The first case of tetanus in man treated by MM. Roux and Borrel's method of intracerebral injection of antitoxin was done by MM. Chaufford and Quenin in Paris on April 26th, 1898, and the patient recovered.<sup>2</sup> Since then some twenty cases have been treated in and near Paris by the same method, and with very encouraging results. During a visit to Paris in October last I had the advantage of seeing this method of treatment carried out at the Civil Hospital, Versailles, by M. le Dr. Vilon and M. Borrel. To both these gentlemen I am greatly indebted for their kindness and courtesy in giving me every facility to see the operation and to visit the case afterwards.

The patient was a middle-aged man in the early stages of traumatic tetanus following a ragged wound of the hand. The muscles of the jaw (masseters) and neck only were involved. He could swallow without difficulty. After the intracerebral injection of antitoxin the symptoms remained as they were for a week, and then improvement slowly set in and went on to convalescence.

In the same hospital there was a convalescent tetanus patient who had also been treated by intracerebral injection of antitoxin. In this case tetanus followed amputation through the lower third of the thigh for gangrene of the leg, caused by a suppurating popliteal aneurysm.

On November 17th, 1898, a case of tetanus was diagnosed at the Cambridge Hospital, Aldershot. On receiving a telegram asking for tetanus antitoxin I proceeded to Aldershot to see whether it might be possible to carry out MM. Roux and Borrel's method of

---

2. *La Presse Médicale*, No. 51, June 18th, 1898.

treatment in this case. The medical officer in charge of the hospital, Lieutenant-Colonel J. Martin, Royal Army Medical Corps, and the medical officer in charge of the case, Lieutenant G. B. Crisp, Royal Army Medical Corps, expressed their approval.

*History.*—The patient was Private A. G., Army Service Corps, aged twenty-two, three months' service. No previous admissions to hospital. He was a strong, well-nourished man, of good physique, and a total abstainer. He was admitted on November 14th for contusion of the testicles, caused by a bump on the pommel of the saddle. For a fortnight before admission he had been going through a course of rough riding in the riding school, and stated that he had several falls and bruises. There were no open wounds, and the contusion of the testicles was not severe.

*Onset of Tetanus.*—On November 16th, two days after admission, he developed symptoms of tetanus. The masseter muscles and the muscles of the neck were contracted, and those of the abdomen slightly so. On November 17th, the spasm of the jaw muscles was marked, and there were also spasms of the muscles of the legs and arms, especially on examination. The abdominal muscles were also slightly contracted.

*Injection of Antitoxin.*—At 9 p.m. he was put under chloroform by Lieutenant Crisp, R.A.M.C., and with the assistance of Lieutenant-Colonel J. Martin, R.A.M.C., I injected  $2\frac{1}{2}$  c.cm. of doubly strong antitetanic serum into each frontal lobe of the brain. At the same time 20 c.cm. of antitoxin were given hypodermically in the flank.

*After-History.*—He had a good night, and on November 18th the tetanic spasms of jaws and stiffness of extremities continued as before, and his condition was unchanged; 20 c.cm. antitoxin was given hypodermically.

On November 19th his condition was about the same; 20 c.cm. of antitoxin were given hypodermically.

On November 20th the spasms were less marked and not so easily excited by noise or other stimuli.

On November 21st the stiffness was less marked.

On November 22nd his condition was improving; he could open his mouth without causing spasms.

On November 23rd the muscles of the jaw and neck were free from spasms, but there was some stiffness of the limbs, and he started and had twitching of the muscles when he heard a noise, notably so when the camp gun went off on the hill, a short distance from the hospital. The dressing was removed from the seat of operation and the stitches taken out. The wounds had healed by first intention.

On November 30th he was convalescent, but weak and anæmic. He was able to get out of bed, but had slight spasm of the arms on



exertion. He presented no brain symptoms, ate and slept well. The temperature was practically normal throughout, pulse and respiration regular.

#### DESCRIPTION OF THE OPERATION.

The details of the operation are as follows: The patient is given an anæsthetic and the hair shaved off the fore part of the scalp, and the skin made aseptic. An imaginary line is taken over the head from one auditory meatus to the other. Another line is taken from the base of the nose to cross the first lines at right angles on the top of the head, and a third line from the outer angle of the orbit to where the first two lines cross each other. The centre of the last line is the seat of operation, and is in front of the motor areas of the brain.

Having selected this site, an incision of about one-half or three-quarter inch in length is made down to the bone. A small hole is now drilled through the bone with an Archimedean drill having a movable collar, so as to regulate the depth to which it penetrates. The hole in the bone need only be a little larger than the needle of the syringe which is to be inserted through it.

The syringe has a screw piston and the needle is attached by about three inches of rubber tubing. The needle is about two inches in length and has a rounded point. It is inserted through the hole drilled in the bone, straight into the brain substance as far as it will go, and an assistant holds it perfectly steady while the operator very slowly screws down the piston, so as to allow the antitoxin to soak into the substance of the brain drop by drop, to avoid breaking up any brain tissue. It should take at least ten minutes to inject  $2\frac{1}{2}$  c.cm.

When this amount has been injected the needle is withdrawn and the edges of the scalp wound drawn together by two or three stitches, and the wound sealed up with collodion and cotton wool. The same operation is now repeated on the other side.

The object of using a round-pointed needle is to avoid puncturing a vessel. A sharp-pointed needle might possibly transfix an artery and produce hæmorrhage, whereas a round-pointed one would glide off a vessel and go past it.

The antitoxin used is double the strength of ordinary antitoxin, and although only 5 c.cm. are given ( $2\frac{1}{2}$  c.cm. in each side), it represents the amount of antitoxin present in 10 c.cm. of the original serum.

The dried antitoxin from 10 c.cm. of the ordinary antitetanic serum is put up aseptically in glass tubes, and sent out from the Pasteur Institute, Paris, ready to be dissolved. The tube containing the dried antitoxin should be opened without contamination, then 5 c.cm. of sterile water added to dissolve it. When the antitoxin is in complete solution, it is filled into a sterile syringe of the

pattern described (Roux's pattern 5 c.cm. syringe), and is now ready for use.

In addition to the antitoxin given intracerebrally, the patient receives 20 c.cm. daily for two, three, or four days, according to circumstances. The antitoxin given intracerebrally immunises the higher nerve centres before the toxin has been fixed there. The antitoxin given hypodermically renders the blood antitoxic, and the toxin, as it becomes absorbed from the source of supply—wound, bruise, abrasion, or any other source, wherever it may be—is neutralised as soon as it enters the blood stream.

The advantage of giving the antitoxin hypodermically in addition to intracerebrally is evident when we reflect that the tetanus bacilli may still be cultivating themselves, and toxin still being absorbed.

In conclusion it is my pleasant task to thank Lieutenant-Colonel Martin, R.A.M.C., and Lieutenant Crisp, R.A.M.C., for valuable assistance at the operation. I have also to thank the latter officer for the history of the case and notes.—*British Medical Journal*.

---

## THE REPORT OF THE LOOMIS SANATORIUM FOR THE YEAR ENDING NOVEMBER 1, 1898.

---

Through the courtesy of Dr. Stubbert, the Physician in Charge, we have received the annual report of the Loomis Sanatorium for Consumptives. In view of the recent attempt in England at some concerted action for the prevention of this disease, under the patronage of the Prince of Wales and Sir Wm. Broadbent, the present report has a particularly timely interest.

The primary objection to all such compilations is that they are invariably presented in a statistical form. Very few men are able to handle statistics; a little knowledge of the art, as of learning, is a dangerous thing. As was said some time ago, in reviewing a statistical effort of a life-insurance medical director on the subject of "Phthisis": "They don't even lie truthfully," and while we have not the slightest doubt that much good has been accomplished by the faithful and scientific work done at this particular sanatorium, we are compelled to question the conclusions which are drawn in the report before us.

Before proceeding to an analysis of this report we must take issue with the author for his use of the word "cured." It is an accepted fact that, according to our present light, it is practically impossible to decide when the word "cured" should be applied to consumptives, especially in the case of females.

It is a common experience to meet patients who, after several years' residence in Colorado, have returned to the East, apparently cured, but who, after a short residence in New York, Philadelphia, Baltimore, or other Eastern cities, have again developed the disease and who have either died or been compelled to return to a high altitude.

This report gives the result of a year's work in the sanatorium from which it seems that 204 patients had been treated during the year ending November 1st, 1898, 78 of whom were there on November 1st, 1897. The patients are divided in to two classes: (1) Those who remained three months or less. (2) Those who remained longer. Of the total 204 the number described as "cured" is 28; of this number 10 are put down in class 1, and 18 in class 2—the latter being those who had been there over three months. In this connection the director says: "It is interesting to note that of those patients discharged after a residence of three months or less, six per cent. were 'cured,' while among those who remained longer than three months eleven per cent. were cured." Here we must take issue with Dr. Stubbert, for while these cases had undoubtedly so improved that there were no longer any bacilli in the sputa or apparent lesion in their lungs, and while they may have seemed in excellent health, the time was too short between the departure of any one of the twenty-eight and the making of this report to justify even the most hopeful in describing them as "cured." Again we must ask the director why he makes no distinction between female and male patients, a very important point it seems to us, for it is well known that phthisis is far more fatal in the female than the male, owing particularly to the fact that tendency to the tuberculosis is inherited through the mother; and, secondly, to the more or less confined life of the woman, which tends to develop the disease. And this latter influence especially holds after her dismissal from a sanatorium even as "cured." We are, therefore, surprised that Dr. Stubbert, in making up his report, makes no distinction between male and female patients.

Of the 204 patients in the sanatorium 67 were "discharged improved"; this is a very unsatisfactory statement and of very questionable application. We have in mind, for example, the case of a "Rough Rider" who on August the 19th had tubercular trouble at the apex of the left lung and bacilli in his sputum; after being mustered out, September 16th, he increased many pounds in weight, his cough stopped, and the bacilli disappeared from his sputum. Two months later (indeed up to December 1st he was in splendid health) he broke down and was sent west with all the symptoms of tubercular lung trouble. We could give many such instances in our practice and it is for this reason that we are inclined to criticise any report treating of this disease in which

patients are described as "discharged improved," or "with the disease arrested." These criticisms apply both to class 1 and class 2 in this report, where the patients are described as "cured," "disease arrested," or "improved." We do not wish to seem hypercritical, for we know great good has been done by the Loomis Sanatorium in combating this dread disease. We desire only to emphasize the fact that great care should be exercised before drawing final conclusions from combinations of what are ordinarily classed as statistics.

The remainder of this report is more useful and interesting. Dr. Stubbert states that there is far more improvement among the patients during the winter than the summer months, and his experience has shown that his patients "brave with impunity the cold northwest winds" and that he has seen eighty patients gather at meals from their cottages day in and day out "without the least detrimental effects." In this connection he states that "the results obtained during the three cold seasons at this sanatorium seem to tend to revolutionize the popularly accepted ideas of the "injurious effects of wind and stormy weather in *incipient* cases of tuberculosis. We do not understand why he speaks of "the popularly accepted ideas," for even more severe conditions exist at Davos, which is to-day, and has been for ten years, the place of all others to which cases, not only of incipient, but of well-developed phthisis have been sent by French, English, and Swiss experts on tuberculosis.

We cordially agree with Dr. Stubbert's conclusions that the patients should be encouraged to take constant exercise and be in the fresh air (under ordinary conditions) as long and as frequently as possible.

The balance of the report is taken up with the auxiliary treatment of special cases with various remedies. What interests us more especially is the experience with the antitubercular serum. He shows that twenty-seven per cent. of those treated lost the tubercle bacillus, although he does not state that they have been followed after their dismissal from the institution. It is but fair, however, to quote his statement: "I have lately examined between fifteen and twenty cases treated with serum and have not found one that redeveloped the disease; all have been enabled to remain in their homes and at their work and have been at the sanatorium for periods varying from six months to a year and a half."

Of the effects of the United States Government serum of Dr. Schweinitz he says: "I believe it to be the duty of the profession to continue the clinical administration along this line, since the three apparent effects noted from the use of this serum have been: (1) "Reduction of temperature." (2) "Decrease of the bacilli." (3) "Possible immunity conferred upon patients after returning to their homes."

With reference to his use of antistreptococcic serum he says that it was naturally used in the hope that he could thereby do away with the streptococcus so that he would then be left to deal with the tubercular affection alone. With this end in view he employed in ten patients the Pasteur serum, selecting of course, only such patients as showed the presence of the streptococci. Judging from the ten cases given it caused the disappearance of the streptococci for a time at least, and though its action was slow it apparently should leave the way open during that time for a more successful use of the De Schweinitz serum.

The report finally deals with forty cases of tubercular laryngitis; of which Dr. Stubbert says that "43 per cent. of the *ulcerated* cases have been discharged cured." This is certainly a very gratifying result; but a long experience with tubercular laryngitis in this country, in England, Germany, in St. Petersburg and Moscow, compels us to believe that the word "cured" should not have been used.

The report shows that a number of other drugs were used without specially good results; among others the new South-American "Kalagua." It would seem from his experience that this has certain merits, but we question whether the results claimed for it by the "Medical National Society of Columbia" are justified.

Finally Dr. Stubbert's experience with what he describes as the "pneumochemic" treatment corresponds entirely with our own experience with the pneumatic cabinet. It is of use only where there is bronchorrhea and excessive cough.

In any event this report is exceedingly interesting. The methods and practice at the Loomis Sanatorium mark a distinct advance in the treatment of tubercular disease and every encouragement should be given to Dr. Stubbert to continue his further scientific efforts toward the prevention and cure of this most fatal malady.—*Medical News.*

### THE REV. MRS. EDDY'S APOLOGIA.

Since the death of Mr. Harold Frederic, Christian Science has been severely handled in the leading newspapers of the United States. The New York *Times*, of which Mr. Frederic was the London correspondent, has been the most outspoken in its denunciations. In a recent editorial article the following passage occurs:

"Why not enforce the law against these homicidal charlatans who practise their hocus-pocus on patients sick with typhoid fever, heart disease, and consumption? They kill, and, so far, kill

unpunished. Not one of them could pass the Regents' examination. It would catch them all, and they would be delivered over to the law if they practised and took fees without a license. The experience of Massachusetts shows that it may be difficult to draft a statute that will net these pests. Common-sense shows that new legislation is not needed. Existing law will protect the ignorant from their deadly impostures if it be enforced."

With the legal aspect of the matter we are not at present concerned. We have referred to the article mainly because it has aroused Mrs. Eddy to reply. The high priestess of Christian Science, who surpasses Miss Marie Corelli in her gift of uttering ineptitudes with an air of inspiration, says loftily that "a person's ignorance of Christian Science is a sufficient reason for his silence on the subject." We cheerfully admit as a general principle that no one should speak of what he does not know, but we take leave to suggest to Mrs. Eddy that she would do well to bear this sound principle in mind when she feels a moving of the spirit to deliver her views on the treatment of disease. When she asks: "What can atone for the vulgar denunciation of what a man knows absolutely nothing about?" we venture to ask in turn, "What more are we expected to know about Christian Science than Mrs. Eddy has set forth in her book?" If the world does not now know all that there is to be known about Christian Science, the fault is Mrs. Eddy's own. She objects to her disciples being described as "pests," but comforts herself and them with the modest reflection that St. Paul and another greater than he were looked upon as pests by "Jewish pagans." She boasts that after her discovery of Christian Science she healed "consumption in its last stages that the M.D.'s, by verdict of the stethoscope and the schools, declared incurable, the lungs being mostly consumed;" that she has healed "malignant tubercular diphtheria and carious bones that could be dented by the finger, saving them when the surgeon's instruments were lying on the table ready for their amputation;" and that she has healed "at one visit a cancer that had so eaten the flesh of the neck as to expose the jugular vein so that it stood out like a cord." We have no doubt that Mrs. Eddy believes herself to have done all these things, but we may be allowed to hint that the statements would be more convincing if she would procure us some better assurance than is here forthcoming. We are all liable to mistakes in diagnosis, and the recognition of such complicated conditions as "malignant tubercular diphtheria," for instance, seems likely to present special difficulties. But after all, the question of diagnosis is of no importance, for if disease be a delusion, it matters nothing what we call it. Mrs. Eddy argues that as homeopathy "is supposed to heal the most violent stages of organic inflammatory disease, to stop decomposition, to remove enteritis, gastritis, gas-

tralgia, hyperæmia, pneumonia, diphtheria, and ossification—the effects of calcareous salts formed by carbonate and sulphate of lime”—with highest attenuations which “have not an iota of the drug left in them,” Christian Science can do the same things without any medicine at all.” She says :

“The difference between metaphysics in homeopathy and metaphysics in Christian Science consists in this forcible fact: The former enlists faith in the pharmacy of the human mind, and the latter couples faith with understanding, and is based on the Divine Mind, knowing that this mind is omnipotent, is infinite, is all. Hence it is the sovereign appeal, and there is nothing therein to attenuate.”

That there is nothing in the mind of the Christian Scientist to attenuate we have no difficulty in believing. When Artemus Ward was told that the Red Man was being driven towards the setting sun, he said it was rough on the setting sun. When we see the prophetess of Christian Science seeking a refuge in homeopathy, we cannot help feeling that it is hard on the homeopaths.

---

TREATMENT OF ACNE SIMPLEX.—McKinney (*Maryland Med. Journ.*, November 19th, 1898) advocates at least three hot baths each week taken at night, followed by cold sponging, and a cold sponge bath every morning for patients who are troubled with acne. A light nutritious diet, plenty of exercise, and bowels kept regular, with cascara if necessary, are points not to be forgotten in any case. Tonics, cod-liver oil, phosphates, etc., may be required by the particular patient. The remedy *par excellence* for acne simplex is calcium sulphid. The proper dose is  $\frac{1}{2}$  of a grain twice daily, and this dose should be steadily increased until four such tablets are taken each day. If the taste is objected to, it may be disguised by sugar coating, or the drug may be given in capsules. In case of excessive gastric irritation, it may be desirable to begin treatment with one-tenth or one-fifth of a grain. In the acute stages of the trouble, arsenic does no good, and may do actual harm. At each visit it is well for the physician to spend a little time in gently squeezing out the larger comedones, and curetting the smaller ones with the comedone extractor. The pustules should be lanced at the base in a slanting direction, and the point of the needle or lancet, swung around in the abscess cavity, to break up its contents. If this be done, so that the pus can be squeezed out without disturbing the overlying crust, the resultant scar will be scarcely noticeable. An antiseptic is needed and can best be applied in the form of a soap containing sulphur or bichlorid of mercury, with which the face can be washed at night, so

that the patient may avoid going into the air until the irritation caused by the antiseptic has passed away. If there is too much irritation from the use of the soap or other preparation, any of the semi-solid creams may be rubbed into the skin several times a day. Following are other good antiseptic preparations :

℞ Sulphur precip. . . . .	℥ i
Ether . . . . .	℥ ss
Alcohol . . . . .	℥ iiii ss.
M. Sig. External use.	

The lotion should at first be applied only at night, but after the skin becomes accustomed to it, it may be used advantageously several times a day. The sulphur often causes considerable irritation when first applied, but rarely so much as to cause its discontinuance.

If an ointment is desired, it may be prescribed as follows :

℞ Sulphur precip. . . . .	℥ i
Ung. aquæ rosæ	} aa . . . . . ℥ ss.
Lanolin	
M. Sig. External use.	

Another good combination is :

℞ Potassii sulphid	} aa . . . . . ℥ i
Zinci sulphat.	
Aquæ . . . . .	q. s. ad. ℥ iv
M. Sig. External use.	

If the skin remains discolored after the papules and pastules have subsided, an ointment of tar and sulphur, or ichthyol and sulphur should be used, rubbing it into the skin for a half-hour each night. The use of very strong stimulants, as naphthol, resorcin, caustic potash, etc., is to be avoided, as their effect is often very injurious to the skin.

---

GASTRIC AND INTESTINAL ANTISEPTICS.—Riegner, of Senator's clinic (*Deut. med. Woch.*) first refers to the various views held as to the possibility of disinfecting the contents of the alimentary canal. He has himself continued the experiments of Strauss upon gastro-intestinal antiseptics. Stomach and intestinal contents were placed in graduated tubes, and grape sugar in equal amounts added. The antiseptic was then added in known quantity in watery or alcoholic solution, and more rarely in powder form when not soluble. The author gives details of a number of experiments. As regards gastric antiseptics, he concludes that



sodic salicylate,  $\frac{1}{8}$  per 1,000, menthol  $\frac{1}{2}$  to 2 per 1,000, and thymol  $\frac{1}{8}$  to  $\frac{1}{2}$  per 1,000 have relatively high disinfecting powers. A medium disinfectant action is possessed by chinol, chloral hydrate, soluble silver, and actol, and only a slight one by even large doses of steriform and ichthyol. As regards intestinal antiseptics, chinol, and thymol arrest fermentation in  $\frac{1}{2}$  per cent. solution, and delay it in  $\frac{1}{6}$  per cent. Actol, bismuth salicylate, or bismuth  $\beta$ -naphthol arrest it in 1 per cent., and delay it in  $\frac{1}{4}$  per cent. Resorcin, chloral hydrate, silver, benzo-naphthol, and steriform are inferior to the agents above-mentioned. From experiments it becomes obvious that antiseptics behave differently in relation to the stomach and intestine. Thus menthol is an excellent gastric, but an inferior intestinal, antiseptic. These questions cannot be definitely settled by laboratory experiments, but must be determined by practice. Thus a disinfectant is useless if too poisonous. Again, a gastro-intestinal antiseptic must be insoluble. This insolubility is also a guarantee against intoxication. Extensive contact with the intestinal contents is desirable, and hence the antiseptic should be given in frequent and small doses. In motor insufficiency of the stomach salicylic acid, menthol, and thymol have been shown to be of clinical value by Strauss. Among intestinal antiseptics Strauss has shown menthol to be worthy of recommendation. Thymol is inferior to menthol, and must be given on a full stomach to avoid irritation. Actol must be given in capsules or pills, which are not soluble in the stomach. Both bismuth salicylate and bismuth  $\beta$ -naphthol are worth trying in flatulency. Sodic salicylate and chinol are too soluble. Washing out the stomach and bowel is an important measure. Salicylic acid, menthol 0.25 g., thymol 0.1 g., may be added to nutrient enemata. The author comes to the conclusion that these antiseptic agents have a practical if somewhat restricted value.—*Brit. Med. Journal.*

---

ANTIDOTAL ACTION OF PULPED NERVOUS TISSUE UPON STRYCHNINE.—M. Toinet and M. Georges Brouardel communicated to the meeting of the Hospitals' Medical Society held on March 29th, some observations of M. Widal and M. Nobécourt on the antitoxic action of pulped nervous tissue upon morphine and strychnine. If a mixture of one gram of nerve substance and a fatal dose or even twice a fatal dose of sulphate of strychnine is injected into a guinea-pig, M. Toinet and M. Brouardel found that the animals in question invariably lived. The observers made researches into the cause of this interesting fact, and found that strychnine was really present in the mixture, that it had not lost its toxic properties, that dilution of the poison made no differ-

ence, and finally that guinea-pigs thus experimented on, if treated with a fatal dose of strychnine, forty-eight hours afterward always died, showing that they were neither refractory nor immune. M. Toinot and M. Brouardel also tried the effect of fatal doses of strychnine mixed with various inert substances, such as charcoal, talc, potato starch, and spinach, and they found that an admixture of these substances had the same preservative effect as nerve pulp, if used in the same proportion and doses. Results were just the same whether the mixture was made twenty-four or forty-eight hours previous to the injection or immediately before. The explanation of these results is in reality very simple and is easily verified by a chemical experiment. Mixtures of carbon, talc, or nerve pulp with strychnine give a filtrate which is absolutely non-poisonous to guinea-pigs, and which when tested shows not the least trace of poison, which, however, can be extracted from the material left behind on the filter. It is obvious, then, that in an injection of this mixture the poison is so fixed and held that it cannot act as a whole, but is set at liberty only very gradually, and the very slowness of this action prevents a mortal dose being set at liberty at one time in the organism. Chemists know well that a solution will give up to inert bodies in certain cases that which it holds in solution, and organic pulps have the same inherent properties and play the same part as inert bodies, as is evident by these experiments. These facts show, moreover, that we must not be too hasty in ascribing antitoxic properties to animal tissues. — *The Lancet*.

---

CONTRIBUTORY NEGLIGENCE.—The doctrine of contributory negligence is a fearful and wonderful thing. The judicial mind can sometimes see it under circumstances that puzzle the ordinary intelligence to find it out. Some years ago, a man, riding in a sleeping-car in a neighboring State, rose from his berth in the early morning to go to the water-closet, which was situated at one end of the car not far from the "vestibule." The morning was still dark and that end of the car was unlighted. In groping about for the closet door the passenger, with true contributory negligence, got hold of the wrong door, which happened to be that of exit from the vestibule, and opening this, instead of stepping into a closet, he walked off the rapidly-moving train and was precipitated to the track alongside. He was thoughtful enough not to carry his contributory negligence to the point of killing himself, but merely contributed negligently to the breaking of one of his legs. He, of course, brought suit. He, moreover, gained his case in the lower courts; but the highest court in the State in which the accident occurred has just reversed the judgment of the court

below in an opinion based upon the doctrine of contributory negligence. The judge who rendered the opinion said that the accident happened, not from defects of construction, but simply because the plaintiff did not regard the darkness. He was heedless, and the company could not foresee and guard against such heedlessness. For, asks the judge, can a man in the full possession of his senses, travelling upon a railroad-train and finding himself plunged into darkness, at a moment when he is groping about in the car, proceed with the same confidence as in the light and be regarded as a prudent man? To which question we should answer that he certainly cannot proceed with the same confidence, but, nevertheless, if he is in urgent need of a water-closet he is not an imprudent man if he gropes for one in an unlighted sleeping-car. He is, on the contrary, doing his duty; and the only contributory negligence that we can see in the cases on the part of the railroad company, which did not keep its car lighted and left the vestibule-door unbolted contrary to the rules. Was this a Daniel come to judgment—or only a Dogberry?—*Phila. Med. Jour.*

---

URÆMIC INSANITY.—E. Bischoff (*Wien. klin. Woch.*) publishes a long and important account of this psychosis, the rarity of which is illustrated by the fact that he has seen only two cases among 3,000 carefully observed lunatics. It appears, however, that uræmia, both acute and chronic, may lead to insanity, though the special pathological anatomy is still obscure. The complication is particularly likely to arise in those who are hereditarily predisposed, or who are addicted to alcohol; in this condition pregnancy is also important, but febrile attacks have less significance than was formerly believed. The actual cause of the mental disturbance is most often the uræmic intoxication, but in a certain number of cases the insanity appears to depend upon the convulsive attacks which it follows, in much the same way as epileptic insanity. It is possible also that the visual disturbances may play some part in the pathogenesis. Uræmic insanity usually runs the course of acute mania, from the other forms of which it is distinguishable mainly by the association of disturbances of the central and peripheral nervous system. These disturbances resemble the paralytic seizures of general paralysis, and since, in many cases of uræmic insanity, there is a marked general lowering of functional activity from the psychological side as well, the differential diagnosis may be rendered difficult; this is particularly the case where the mental defect expresses itself as weakness of intelligence, judgment and memory. When uræmic insanity attacks patients who have a strong hereditary predisposition, the symptoms of acute mania are often accompanied by katatonic attacks. The prognosis is, in all

cases, bad as regards life, but if the uræmic condition passes off there is considerable prospect of recovery from the mental impairment. The treatment must, of course, be directed to the two conditions, uræmia and insanity. The author considers that the latter is, so to speak, continuous with ordinary uræmic delirium, all intermediate stages existing. It is therefore important to watch the progress of the latter, with a view to early psychiatric treatment.—*Brit. Med. Jour.*

---

UNCONTROLLABLE VOMITING OF PREGNANCY.—Klein (*Zeitschr. f. Geburtsh. und Gynäk.*) recommends systematic treatment for the hyperemesis gravidarum. Care must be taken to exclude all cases where the sickness is not essential to pregnancy in any individual patient, and where, though limited to gestation, it does not cause serious debility. It may be neurotic or hysterical. It tends to pass through three stages if unchecked. In the first stage vomiting occurs immediately after meals; in the second, it comes on spontaneously or at the mere thought of taking food; in the third, symptoms of extreme debility are present—fever, faint odor of the skin, delirium, etc., ending in death. The first two stages are best treated by purely dietetic means, combined with perfect mental and bodily repose. Fluids alone should be given, such as milk, thin soups, fruit juice and mineral waters. Tea, coffee and cocoa must be forbidden, as they increase the tendency to vomit. Should this dietetic treatment fail after a few days' trial at the patient's home, it is best that she be treated in a nursing institution, where the diet can be administered with due punctuality and strictness. Klein does not recommend treatment by "suggestion," nor by drugs, nor any local appliances, unless a definite lesion like impaction of the retroflexed uterus in the pelvis exists. Even in the third stage of hyperemesis the induction of premature labor is rarely required. Prevention of the increase of hyperemesis is the first aim of the physician, hence strict diet must be enforced as early as possible; whilst if the treatment be commenced when the patient's condition has become very grave it seems, in Klein's opinion, still preferable to operative obstetric interference.—*Brit. Med. Journal.*

---

A RECENT number of the *Deutsche Medicinische Wochenschrift* reviews three articles that have appeared within the last year on that indefinite condition, swelled foot, or œdema of the feet, that so often occurs in people, like soldiers, who are much on their feet and have in addition suffered from slight accidents. The articles are all from military medical men who have made special studies of the subject, and of late have called the Röntgen-rays

to their aid in the matter. One of the articles we called attention to some time ago, but circumstances seem to invite more special attention to it just now. All three of these surgeons have found that these foot conditions which are apt to be set down simply as sprains, and really make up the vast majority of the cases that are entered in case-books under the indefinite head of sprained ankle, are really due to fractures of the metatarsal bones. In certain cases the line of fracture can be distinctly seen in the Röntgen photographs, though in many it cannot. In some even after the healing the callus is visible in the same way. Kirchner reports fifty-five cases of the condition, in all of which some characteristic symptoms of fracture could be demonstrated when it was carefully looked for. He considers that in all of these cases in which, after slight injury, a turn on the foot, a misstep, sometimes the failure to notice a step, or the like, œdema of the foot develops, with tenderness when the foot is used, the underlying pathological condition is a metatarsal fracture. The treatment is of course, rest, and the firm support that practically immobilizes the metatarsal joints afterward. He warns especially against meddling massage and attempts to reduce the swelling in the early stages and overcome the stiffness that is Nature's protective mechanism, during the progress of the cure, by manipulations of the foot. Such misdirected efforts lead to the development of that chronic soreness so often seen as a sequel in these cases, and which may persist as a torture to the patient for the remainder of life.—*Medical News.*

---

DRY LABOR.—Brodhead (*N. Y. Med. Rec.*) discusses the dangers and treatment of this condition. Strictly speaking, a dry labor is one in which the membranes have ruptured prior to or with the first pain, but for practical purposes all cases are included in which the membranes rupture during the first stage, when the "water wedge" has yet much to accomplish. The author's experience is that rupture with the first pains occurs in fifteen per cent. of cases, and twice as often in multiparæ, as in primiparæ. The dangers to the child are asphyxia and meningeal hæmorrhage, the two being frequently associated, and being caused by pressure on the cord and interference with the foetal circulation. The dangers to the mother are œdema of the cervix and vulva, laceration of the soft parts, to which the œdema predisposes, pressure necrosis, hæmorrhage, liability to sepsis, rupture of the uterus, either spontaneously or during difficult efforts to extract the child, together with those constitutional symptoms which arise in cases of protracted labor. As regards treatment, the author's plan is to give at once a large dose of castor oil and glycerine, followed shortly after by 10 gr. of quinine sulphate, repeated every three hours, with one-

thirtieth gr. strychnine sulphate every two hours. Antiseptic precautions must be unusually thorough and the vulva should be kept protected by an antiseptic pad, changed as often as saturation with amniotic fluid makes necessary. Chloral and opium should be given with great caution, as these cases generally need stimulation rather than a period of rest. As a theoretical procedure he speaks well of tamponing the vagina to hinder escape of amniotic fluid. He advises early operative interference in most cases, and thinks that not more than half an hour should elapse after the second stage of labor has begun before such interference is resorted to. For douching, lysol gives excellent results.—*Brit. Med. Jour.*

---

THE TREATMENT OF SUPPURATION BY BICARBONATE OF SODA.—Brucker (*Thèse de Bordeaux*) has made a study of a fact observed by himself, namely, the influence of the reaction of the blood in the healing of certain conditions. Bearing in mind that the normal alkalinity of the blood shows important variations according to sex, age, and as to whether the blood is arterial or venous in origin, and the diet to which the patient has been addicted, and that in certain pathological conditions these variations are very marked, so that a reduction in the normal alkalinity is observed in certain cases of febrile reaction due to bacterial intoxication, he has found that certain artificial intoxications can be combated by raising the alkalinity of the blood by the injection of alkaline serum. Going on these grounds, Brucker has principally investigated the influence of alkaline dressings in the treatment of local inflammatory affections, and according to his observations such a dressing, whether moist or dry, very rapidly reduces the inflammation, suppurative or otherwise, and causes rapid healing of wounds. This seems independent of any antiseptic property in the proper sense of the word. The method employed by him is to apply the dressing of absorbent wool on ordinary principles, using merely a two per cent. solution of bicarbonate of soda, or in some cases vaselin and bicarbonate (1 in 25), or the soda may be applied directly in the form of a powder. He finds that strong solutions do not act more quickly than a two per cent., showing that the chief agent is the alkali, and not any antiseptic principle. The same method may be applied for purulent otitis, etc.—*British Medical Journal*, June 13, 1898.

---

APPENDICITIS AND RENAL COLIC.—Dieulafoy, in a clinical lecture (*Journ. de Méd.*), points out that in some cases the diagnosis between appendicitis and renal colic is one of considerable difficulty. A patient under his care had two years previously suffered

from pain in the right side of the abdomen, somewhat diffuse in character, and accompanied by vomiting and constipation. There were three attacks in all at different times, and on one occasion the diagnosis was thought to lie between hepatic and renal colic. On the last occasion it was noted that there was no tenderness over the cæcum, and from the fact that there was severe testicular pain the medical man in charge of the case concluded that it was one of renal colic. Dieulafoy, who saw the case, however, was inclined to doubt the diagnosis of renal colic, as there was no tenderness over the kidney; and, secondly, from the fact that the testicular pain gradually increased in intensity to subside in the same manner, instead of coming on suddenly and rapidly disappearing, as in renal colic. The case was operated on by Marion, who found a curved appendix lying behind the cæcum. It was in an ulcerated condition, and adherent to the psoasiliacus. In this situation it exerted some pressure on the genito-crural nerve. In point of fact, this nerve is partly distributed to the cremasteric and testicle, and it is to its irritation that the testicular pain of renal colic is due; consequently, the result in an appendicitis of this nature, or renal calculus, etc., will be the same although the cause is different. Dieulafoy states that in very many cases he has noticed a certain degree of similarity in the symptoms of appendicitis and stone in the kidney.—*Brit. Med. Jour.*

---

A CASE OF CYSTINURIA.—E. M. von Eberts (*Montreal Medical Journal*, August, 1898) describes a case of a chlorotic woman who had complained of "scalding" on micturition for five months. Examination of urine gave a specific gravity of 1035; distinctly acid; recent specimens clear straw color, but on standing twenty-four hours developed a peculiar faint greenish-yellow tinge with distinct odor of sulphydric acid. An abundant colorless crystalline deposit, closely resembling triple phosphates, appeared at the end of six hours. Microscopical examination showed numerous six-sided tablets, arranged singly or in rosettes, with highly refractive borders, giving the typical chemical tests for cystin, with solutions of ammonium and acetic acid. The writer says that cystin crystals may be readily differentiated from six-sided crystals of uric acid by the addition of ammonia, which dissolves the cystin (which crystallizes out on evaporation), but with uric acid forms crystals of ammonium urate. From triple phosphates, crystals of cystin are distinguished by the addition of acetic acid, the former being readily soluble, the latter remaining unchanged, or if anything their definition being made perfect. The crystals may be obtained in fairly pure state for preservation by repeated washing on the filter with dilute solution of acetic acid and subsequent drying.

THE NATURE OF DIAZO-REACTION.—Geisler (*Pratch*) has accidentally discovered that peptonised meat bouillon gives a characteristic reaction with Ehrlich's test. No such reaction could be obtained with either fresh meat juice or pure peptone. Evidently the reaction is due to some substances formed in the process of preparing the meat bouillon, when chemical changes at present unknown to us take place. A bouillon solution of typhoid bacilli gives much feebler reaction than the peptonised bouillon by itself, showing that some of the substances on which the diazo-reaction depends are destroyed by the germs. The one peculiarity about the reaction with meat bouillon is that there was no precipitate. This has been shown to depend on the more favorable medium of the bouillon for the preservation of the unstable coloring substance. The clinical experiences of different observers have led the author to conclude that the presence of diazo-reaction in the urine depends on the amount of leucocytolysis, or the solution of white blood corpuscles in the blood-serum present in any disease. This is most marked in typhoid fever, in measles, in erysipelas, in leucocytosis, in pyæmia, and in other suppurative diseases. Leucococleins prepared from pus, with the aid of artificial gastric juice, as well as other substances dissolved out of the leucocytes, did not give the diazo-reaction. A negative result was also obtained with the blood, cerebro spinal fluid (in tapping for tuberculous meningitis) and pleuritic fluid taken from patients, whose urine gave a marked diazo-reaction. The author is therefore of opinion that the substances giving the diazo-reaction must be formed in the kidneys themselves during the excretion of the products of leucocytolysis from the blood —*Brit. Med. Journal*.

---

THE first qualified woman physician in Europe, as far as is known, was a young Athenian woman named Agnodice. In the year 300 B.C., says the *Journal of the American Medical Association*, she disguised herself as a man and began to attend the medical schools at Athens, which it was against the law for a woman to do. She afterwards practised among the women of Athens with extraordinary success. Her secret becoming known, she was prosecuted for studying and practising medicine illegally. The Athenian women, however, raised so furious an agitation in consequence, that the case was dropped and the law repealed. Coming to later times, we find several women who obtained the degree of doctor of medicine and practised in Europe before 1492, especially in the Moorish universities of Spain. Trotula of Rugiero, in the eleventh century, had a European reputation and practised in Salerno. At the beginning of the fourteenth century, Dorothea Bocchi not only received the degree of doctor, but was



professor of medicine in the University of Bologna. Since then two other women have been professors of medical subjects in the same university, Anna Mangolini (anatomy) and Dr. Maria delle Donne (obstetric medicine), the latter being appointed in 1799. In the year 1811 an edict was issued in France forbidding surgeons and female surgeons from practising until they had passed a satisfactory examination before the proper authorities. These female surgeons are again referred to in an edict in 1852.—*Medical Age*.

---

AUTO-INTOXICATION IN EPILEPSY.—Solaro (*Ky. Med.*), in a synthetic review of recent opinions on this question, finds probable evidence of auto-intoxication in the phenomena of the aura, in the supervention of dementia, in the dyspeptic disorders which often precede an attack of epilepsy, for example, vomiting, sector of breath, constipation, diarrhœa, slight icterus, etc. So also the sphygmographic changes observed in blood tension before and during an attack may be referred to toxic influences. The toxicity of the urine was found by Voisin and Petit to be less during the attack and greater after. Krainsky found that for one or two days before an attack the elimination of uric acid in the urine is lessened, whilst immediately after an attack it was increased. This was so constant a phenomenon that attacks could be predicted or diagnosed afterwards from the examination of the urine with regard to the uric acid. The actual substance causing the attack, according to Krainsky, is carbamate of ammonia. Indican and acetone have also been suggested as epileptogenic poisons. The serum of the blood of epileptics has a strong toxic action during the attacks. Treatment addressed to the eliminating organs, to the digestive tract, receives fresh sanction on the view that auto-intoxication plays no inconsiderable part in the production of the epileptic attack. The rôle of the bromides in calming the cerebral irritability is in no way lessened by laying stress upon the importance of getting rid of toxic substances in the organism.—*Brit. Med. Jour.*

---

DR. MICHAELIS, Prof. Von Leyden's assistant, who has been able to demonstrate the gonococcus several times on the heart valves in gonorrhœal endocarditis, found some time ago tubercle bacilli in cardiac vegetations in certain cases of tuberculosis, either acute or with the acute exacerbations indicating that at some time the bacillus was in the circulation. The question arose whether the bacilli were only coincidentally present in the vegetations, as a consequence of their presence in the blood current at a moment when their imprisonment was favored by some concomitant diseased condition of the valves, or whether they really played an etiological

*rôle* in the production of the vegetations. Working under Dr. Michaelis' direction in Prof. Von Leyden's laboratory, Dr. Blum, of San Francisco, has been able to demonstrate, experimentally, that the tubercle bacilli are an active factor in the production of the valvular vegetations, and Dr. Michaelis reported the observations and demonstrated the specimens at the last meeting of the Verein für Innere Medicin. The aortic valves in rabbits were injured by the insertion of an instrument through the carotid and then tubercle bacilli were injected into the circulation. When the animals were killed some weeks later, in certain cases vegetations were found on the valves at the injured parts, in which a pure culture of tubercle bacilli could be demonstrated. The experiments are taken to prove that valvular lesions may be the result solely of tuberculous infection, a question which has hitherto been in dispute.—*Medical News*.

---

DIETETICS OF HEART DISEASE.—At the recent annual meeting of the American Medical Association, R. H. Babcock, of Chicago, referred to the vicious circle established between digestion and heart disease. Venous stasis of stomach, intestines, pancreas, gall ducts and liver, intensified the difficulties of nourishment under these conditions. Not only was digestion impaired, but the glycogenic, urea forming, and protective functions of the liver were added to the problem. Anæmia was thus added, also uric acid accumulation in the system, and deficient general oxidation. Two classes of cases were to be considered: (*a*) those in which compensation was present; (*b*) those in which compensation was lessened or lost. In the second class the dietary must be restricted. The "gone" feeling and thirst in these cases were no indication for food. Food should not be given too often, but at intervals of five or six hours. The stomach was to be spared, and the symptoms would improve. If necessary, somatose, nutrose, or even nutrient enemata might be given. Hot water before meals was useful. The amount of fluid taken with meals should be restricted. In the presence of œdema it should be reduced to a minimum. This included milk also. Starch, sugar, and fats were bad, owing to their tendency to cause flatulency and post-prandial pressure. Proteids were best. Apples, peas, beans, meats, oysters, were all good. When nephritis complicated it, milk was to be used; when arteriosclerosis, no food containing much calcium salts should be taken.—*Brit. Med. Journal*.

---

THE THYROID THERAPY.—The *Northwestern Lancet* of June 15, 1898, has in it an article on Thyroid Therapy by Haldor Sneve. The conclusions which he reaches are as follows: 1. The thyroid

gland produces a secretion of the greatest importance to the metabolism of the body. Absence of function produces cretinism if congenital myxedema is acquired. 2. Simple hyperplasia (simple goitre) does not produce marked pathological disturbances, but the writer believes it to be a larvated form of exophthalmic goitre, and that so-called "nervousness" can be found in the vast majority of cases. 3. Hyperplasia associated with disturbance of the cervical sympathetic is the disease known as exophthalmic goitre. 4. Surgical interference in diseases of the thyroid gland should be limited to the removal of neoplasms; thyroidectomy in exophthalmic goitre is unphysiological, irrational, and dangerous. 5. In the majority of cases of exophthalmic goitre, medicinal hygienic treatment, rest, galvanism through the neck (two to five milliamperes), tonics, sodium phosphate and thymus gland will effect amelioration. In cases refractory to medical treatment where life is threatened, section of the cervical sympathetic should be practised. 6. Many cases of neurasthenia are cases of masked exophthalmic goitre and should be treated accordingly. 7. Thyroid therapy is specific in sporadic cretinism, myxedema, and simple goitre, and removes obesity. 8. Thyroid extract increases the unpleasant symptoms in exophthalmic goitre, and is a reliable test also in the masked form of the disease.—*Therapeutic Gazette*.

---

THE VALUE OF DRAWING AND MODELLING IN THE STUDY OF OSTEOLOGY.—In beginning the study of anatomy the medical student is confronted with a great many uninteresting descriptive details and a long list of names which are entirely unfamiliar to him, and which he naturally has great difficulty in remembering. In his trouble he memorizes the descriptions of the books, and hopes he is learning anatomy; but, while he becomes able in this way to repeat long lists of names, to give the attachment of a muscle, to describe a bone or to name the branches of a given artery at the base of the skull, he cannot demonstrate these things upon a subject. In the study of anatomy, as in the study of any branch of natural science, you should study nature herself, and learn to observe systematically and carefully, and to remember what is observed, thus making memory of great importance in anatomy, but not as the memory of words, but the memory of form. In order to cultivate the habit of systematic observation and memory for form he recommended modelling or drawing the object of study. He thought it essential that the student should reproduce the natural object in order to be able to recall the form to his mind. He spoke of the study of books or the dissection of a part in the laboratory as an analytical process, while the making of a model or a drawing was synthetical, and said that not until the student has made such a synthesis can he be sure

that he has grasped all the details in their proper relation. To the possible objection that this method would be limited to those who can draw well, he stated his belief that everyone can draw well enough to profit much from his work, and offered in evidence models and drawings which had been made by the members of the first year class. With, but one exception, no student in this class had received any special training in drawing, and yet the work of all is very creditable and, in some cases, wonderfully accurate.—*Dr. Harrison, in Maryland Medical Journal.*

---

THE ANAPHRODISIAC ACTION OF THYROIDIN.--Anaphrodisiacs are not greatly in demand in therapeutics though various drugs are known to exert incidentally a depressing effect on the genital functions. According to Dr. Riviere, of Lyons, thyroidin is one of the latter group, and he reports two typical cases of men who sought relief from exaggerated obesity in the thyroid treatment. They both lost weight very rapidly under the influence of the drug, but observed with surprise, not unmixed with apprehension, that the sexual function had fallen completely into abeyance. This condition persisted for some time after the cessation of the treatment, though the function was eventually restored. It is suggested that this "therapeutical castration" may possibly help to explain the inhibitory influence exerted by the gland on the growth of uterine myomata, and especially on the hemorrhage which their presence occasions. On the same lines there is reason to believe that thyroidin may prove useful in the treatment of prostatic patients whose troubles are due to congestion of the genito-urinary apparatus.—*Medical Press and Circular, June 1, 1898*

---

THE EFFECT OF ALKALIES ON GASTRIC SECRETION.—Hayem (*Sem. Med.*, April 20th, 1898) states that alkalies given for some time and in sufficient doses, so far from curing hyper secretion of hydrochloric acid, are the most powerful agents in producing it. This is especially true of bicarbonate of sodium. They produce this effect after being absorbed and during their excretion. That is not due to their local action on the gastric mucosa is proved by mineral waters, which aid the absorption of alkalies, producing hyper-chlorhydria more readily than alkalies alone. The above is true only if the gastric glands are numerous and active. If the mucosa is atrophied, instead of raising the digestive power of the gastric juice with a tendency towards hyper-chlorhydria, alkalise depress and aggravate the hypopepsia.—*Brit. Med. Journal.*

# DOMINION MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

---

---

EDITOR:

BEATTIE NESBITT, B.A., M.D., F.C.S.

TERRITORIAL EDITORS:

DR. J. DUNCAN, Chatham.

DR. M. F. LUCAS, Ingersoll.

DR. W. J. WEEKES, London.

DR. J. CAMPBELL, Seaforth.

DR. GILLIES, Teeswater.

DR. H. R. FRANK, Brantford.

DR. A. R. HARVIE, Orillia.

DR. H. J. HAMILTON, Toronto.

DR. A. J. CREASOR, Toronto.

DR. J. S. SPRAGUE, Stirling.

DR. C. J. CHIPMAN, Ottawa.

---

---

*Address all communications to the Publishers, DOMINION MEDICAL MONTHLY, 77 Grosvenor Street, Toronto, Canada.*

---

---

VOL. XII.

TORONTO, FEBRUARY, 1899.

NO. 2

---

---

## ONTARIO MEDICAL LIBRARY.

At the annual meeting of the Library Association in June last, the President, Dr. J. E. Graham, made a strong plea for the establishment of a fund, the interest of which should be devoted exclusively to the purchase of "New Books." He felt that the tables were fairly well covered with the best journals, but that the shelves were wanting in the latest "book" publications.

The suggestion was taken up at the next meeting of the directors. As a result an "Endowment Fund" is now in actual existence, and we trust before long it will have swollen to such proportions that the interest will ensure the annual purchase of a goodly number of the new books as they appear. The President was the first one to subscribe to this fund, and he promised \$500, as per this memorandum.

We, the undersigned, promise to give to the Endowment Fund of the Ontario Medical Library Association, the sums written opposite our names, on the following conditions:

1st. That the principle shall be safely invested and the interest alone used for the purchase of the new books.

2nd. That the sum be paid in five equal annual instalments, the first payment to be made in three months after date of subscription.

3rd. That in case of decease of a subscriber, his heirs shall not be bound to continue the payment of the instalments.

4th. That the subscriber pay interest at the rate of five per cent. per annum on the unpaid instalments.

A number have subscribed to this fund in amounts ranging from \$500 or \$25. While \$100 or \$200 may seem a fairly good-sized subscription to the average practitioner, it must be remembered that this amount is spread over five years, and that the library receives only the benefit of the interest. Will the readers of the *DOMINION MEDICAL MONTHLY* help to swell this "Fund" and thus increase the usefulness of the only professional library in the Province—a library originated by the profession for the profession.

In a previous issue we noted with pleasure that Dr. Wm. Osler has volunteered to found a "Bovell Library" in connection with the Medical Library, to perpetuate the memory of his first teacher in medicine, the late James Bovell.

The following is a list of books purchased for the Bovell Library. It is the first of five annual instalments bought with Dr. Osler's donation.

The most recent Editions of: "American Text-Book of Therapeutics," "Diagnosis" (Vierordt), "Chemical Physiology and Pathology" (Haliburton), "American Text-Book of Physiology, "Physiology," vol. I (Schafer), "Pathological Technique" (Malloy and Wright), "Clinical Methods" (Hutchison and Rainy), "Clinical Diagnosis" (Simon), "Medical Diagnosis" (Mussler), "Diseases of the Skin" (Hyde), "Tumors" (Sutton), "Diseases of the Stomach" (Hemmeter), "Diseases of the Stomach" (Sydney Martin), "Pyogenic Infective Diseases of the Brain and Spinal Cord" (MacEwen), "Diseases of the Heart" (Broadbent), "Genito-Urinary Tuberculosis" (Senn), "The Tongue as an indication of Disease" (Dickinson), "Clinical Examination of the Blood" (Cabot), "Gout and Rheumatism" (Garrod), "Nervous Diseases," 2 vols. (Gowers), "Heart and Aorta" (Balfour), "Heart and Aorta" (Gibson), "Anatomy," colored plates, (Gray), "Tumors" (Senn), "Contributions to Clinical Medicine" (Anderson), "Diagnosis" (Hare), "Journal of Experimental Medicine."

It will be noticed that the works are on Medicine, Physiology, Pathology and allied subjects; departments of medicine in which Dr. Bovell was particularly interested, and in deference to the wish of the donor, who has ever taken a most sincere and frequently a practical interest in the Ontario Library.

We would suggest to the Board that when they require new books on any subject, they might communicate with the journals. There are at least eleven of the above books we would have been pleased to give them as they appeared had we known they wished them. All we would ask is that we receive the same treatment as other donors.

## Editorial Abstracts.

### THE CHEMICAL NATURE OF THE ACTIVE PRINCIPLE OF THE SUPRARENAL CAPSULE.

Ever since the announcement by Schäfer and Oliver of the peculiar action of an aqueous extract of the suprarenal capsule on the blood pressure, great interest has been aroused, followed by much speculation on the nature of this body. The profession know the chemical difficulty of extracting alkaloids, which are perfectly well known, by methods equally well known, but here was a substance, very easily oxidised, which occurred in the suprarenal gland in quantities of probably less than a fifteen thousandth part of a grain to each gland, and that if the nature of the substance were known, and a perfect method of extraction had been devised, it would require the glands of 2000 sheep to give us one drachm of the active substance. When we consider the amount of proteid and other material which must go into solution, we can conceive the almost hopeless outlook for the solution of this problem. If the problem was to be solved, it would be expected, as in the past, that its solution would come from some of the large German laboratories by a man who had spent his life at this work, and who had at his back one of those German factories, who make it their business to encourage all this class of scientific research, from the simple knowledge, that one discovery may mean a fortune to them. It is therefore a source of unbounded pleasure and pride, that we are able to announce, that, for the first time the laurels have been captured by our own continent, by the discovery, identification and analysis of the active principle of the suprarenal body by Dr. John J. Abel, Professor of Pharmacology, Johns Hopkins Medical School. The first step in this work is what is chemically known as benzoating the body, obtaining thereby a pure benzoate. This work, which was published by Prof. Abel, last year in *Johns Hopkins Hospital Bulletin*, as also in this paper this year, was subsequently confirmed by a German scientist, Fürth, who was working on this problem. After obtaining the benzoate, Professor Abel then made other compounds, and as the result of his analyses he considered the empirical formula to be  $C_{17} H_{15} N O_4$ , thus approaching in elementary composition some of the alkaloids. The composition of pseudomorphine, for example, is represented by  $C_{17} H_{19} NO_4$ , that of cocaine by  $C_{17} H_{21} NO_4$ , that of sanguinarine by  $C_{20} H_{15} NO_4$ , and that of benzylidene collodine dicarboxy acid by  $C_{17} H_{15} NO_4$ , and among these alkaloids sanguinarine is noteworthy for its power to raise the blood pressure. It was found that skatol was one of

the decomposition products of this body. It is of interest to note in this connection, as the author points out, that Støhr has shown that skatol is liberated when strychnine is heated with calcium oxide, and that Hoffmann and Königs have obtained indol from tetrahydroquinoline by passing its vapor through a tube heated to redness. He considers the picrate will likely prove the easiest to manipulate and most valuable and promises future contributions in regard to it. There is no doubt that the future of medicine lies in the domain of biological chemistry. It is there the greatest triumphs will reward the investigator, and the greatest benefit accrue to medical science from the practical application of his results. We can rest assured, however, with such a distinguished investigator as Professor Abel to head the school of biological chemistry here, that in the future we will have to share very few of our triumphs with Europe.

---

#### TREATMENT OF PNEUMONIA WITH LARGE DOSES OF DIGITALIS.

MARAGLIANO recommends the neutralization of the pneumococcus toxine by large doses of digitalis. On the first day the patient receives 4 gm. of digitalis in an infusion, and if the case is a severe one this may be repeated in the second twenty-four hours. This dose is diminished with the pulse frequency. Usually 12-16 gms. are necessary in the course of a pneumonia. While these large doses are well borne by pneumonia cases, they are injurious to well persons, due to a neutralization of the pneumonia toxine by the digitalis, for the addition of  $1\frac{1}{2}$  cgm. digitalin to 10 gm. of a culture kills the pneumococcus. Even the addition of 3 mg. to 10 gm. of the medium hinders their development. This action seems to be specific since the growth of other organisms, as the typhoid or cholera bacilli, or the streptococcus pyogenes, is uninfluenced. Other alkaloids as cocaine, strychnine and atropine in the same strength have not the slightest influence on the growth of the pneumococcus. The lethal dose of the pneumonia toxin is 1 gm. per 100 gm. rabbit. This dose kills promptly. If now one per cent. digitalin is added the animal remains alive. By injecting the blood of patients treated with digitalin one can prove the influence of the toxine upon the heart and its neutralization by digitalin. The action upon the fever and the inflammatory process follows its action upon the pulse. The toxine causes an increase in pulse frequency and cardiac weakness. The neutralizing action of the digitalin upon the heart can be recognized in twenty-four hours. If in the first twenty-four hours this influence is not distinct the prognosis is bad. It is important that the treatment is begun in the first three days.—(*Theor. d. Gegenw.*, n.s., v. 4, 1898, p. 677.)



## HEMOLUM HYDRARGY-IODATUM AS AN ANTISYPHILITIC.

JORDAN, A.—The value of hemolum hydrargyro-iodatum as an antisyphilitic. (*St. Petersb. med. Woch.*, No. 20, 1898.) This new preparation was introduced for internal use by Kobert. It contains beside iron 12.35% metallic mercury, and 28.69% iodine. Jordan used it on seven cases of syphilis in the following form :

℞ Hemoli hydrargyro-iodate. . . . . 8.0  
 Extr. et pulv. liquiritæ . . . . . q.s.

ut. f. pilul. No. 50, to be taken in increasing doses from six to ten pills a day. In one of these cases it had to be discontinued on account of salivation, but was well borne by the remaining six. In two women the syphilitic lesions rapidly disappeared, while on the men this result was very much delayed so that other agents had to be resorted to.—(*From Therap. Monats.*, 1898, p. 522.)

## ACTION OF TANNOPIN.

JOACHIM, G.—Action of tannopin. (*Allg. med. cetr. ztg.*, 1898, p. 68.) Tannopin, which is a condensation product of tannin and urotropin, has been used with success by Schreiber in acute and chronic intestinal catarrhs. While calomel is very efficient in cholera nostras, yet there are cases where the diarrhea has lasted several days, and further purgation would lead to collapse. In such cases Joachim finds tannopin efficient. He has also treated successfully with it fresh cases of cholera nostras and enteritis. He combined it with calomel as, follows :

℞ Tannopin. . . . . 0.3–0.5  
 Calomel . . . . . 0.005

M. f. pulv. S. One powder three or four times a day.

## TOXICITY OF OVARIAN CYSTIC FLUID.

AUCHE AND CHAVANNAZ.—Action of the intraperitoneal injection of the contents of ovarian cysts. (*Arch. de Méd. exp.* v. 10, pp. 160 and 214.) The fluid from parovarian cysts and proligerous cysts of the ovary, when there is no suppuration, is aseptic. Injected into the peritoneal cavity of rabbits the parovarian cystic fluid is only feebly toxic analogous to sterilized serum, while that from proligerous cysts is variable, at times much more toxic than at others. This toxicity manifests itself by emaciation and weakening of the animal. Clinically some surgeons consider the rupture of parovarian cysts as of no importance, while rupture of ovarian cysts may be followed by rapid death with hectic symptoms.—(*From Rev. d. Sci. méd.*, v. 52, 1898, p. 74.)

## PHYSIOLOGY AND PATHOLOGY OF THE PLEURA.

GRAWITZ.—Physiology and pathology of the pleura. (*Berl. klin. W'och.*, 1897, No. 29.) Around pleural adhesions of those who live in a smoky and dusty atmosphere, pigmentation of the costal pleura often occurs. Even in young persons with no marked pigmentation of the lungs, deposition occurred in the pleura-costalis. It consists of carbon particles, iron dust and amorphous derivatives of the blood coloring matter, and lies in the deep and superficial layers of the pleura. According to experiments on rabbits, they are the result of the direct penetration of the lung tissue and pleura pulmonalis. This would explain the cases of pleuritis after inhalation of irritant vapours. Aschoff in one-fourth and Eichorst in one-third of their cases of idiopathic pleuritides found no bacteria.—*From Cent. f. inn. Med.*, 1898, p. 146.

---

## CLINICAL AND BACTERIOLOGICAL EXPERIMENTS WITH HOLOCAIN.

RANDOLPH, R. L.—Conclusions from clinical and bacteriological experiments with holocain. (*Bull. Johns Hopkins Hosp.*, v. 9, 1898, p. 154.) Randolph reports upon the use of holocain on fifty-four cases at the Johns Hopkins Hospital. Seventeen of these were cases of foreign body in the cornea—the anæsthesia required not quite two minutes. Three iridectomies, eight cataract operations, and eight tenotomies were performed under it, and only the same number of instillations were made as with cocain, and no difference in anæsthesia was noted from that with cocain. There was no drying of the cornea or desiccation of its epithelium or dilatation of the pupil. A 1 per cent. solution not only inhibited but actually killed pus organisms after a certain time.

---

## MOLECULAR CONCENTRATION AND ELECTRICAL CONDUCTIVITY

STEWART, G. N.—Experiments on molecular concentration and electrical conductivity. (*Brit. Med. Journ.*, 1898, v. 2, p. 778.) “When blood or serum is allowed to putrefy the curves of conductivity and of molecular concentration go on rising for a time, until ultimately a maximum is reached which is then maintained indefinitely. At the point where the curves become parallel to the abscissa, the liquid is found to be crowded with bacteria that have formed spores. A measure of the intensity of bacterial action may in this way be obtained.”

---

## AN EARLY SYMPTOM OF MEASLES.

KOPLIK, of New York, described an eruption on the mucous membrane of the cheeks, which appears at the beginning of the prodromata of measles. It consists of a bluish-white round efflor-

escence of from 0.2 to 0.6 mm. in diameter, which usually occurs in the centre of a lentil-sized reddened area of mucous membrane. Occasionally Koplik's spots occur on the mucous membrane of the lips and tongue. The spots are not apparent under a yellow lamp light. They appear on the first or second day of the prodromata increasing up to the beginning of the cutaneous eruption, and disappear after six or seven days. Slavyk, of Berlin, made a similar observation.—(*Therap. Monats.*, 1898, p. 697.)

---

#### ORTHOFORM EMULSION.

KASSEL, C.—Orthoform emulsion. (*Therapeut. Monats.*, 1898, p. 556.) After the insufflation of powders into the larynx there follows an attack of coughing, the duration of which depends upon the insolubility of the powder. To avoid this with orthoform Kassel injects, with a wide mouth laryngeal syringe, orthoform in olive oil (25 to 100). The burning sensation, which lasts only a few minutes gives place to a sensation as if something stuck in the throat; during this period, which lasts about a quarter of an hour, one can eat without pain, in some cases the anæsthesia may last from twenty-four hours to three and a half days. Kassel's observations were confined to cases of tuberculosis. In secreting ulcerations there was soon a diminution of secretion.

---

#### SUBSTANCES IN THE URINE CAUSING SALIVATION.

MAVROJANNIS.—Substances in the urine causing salivation. (*Therap. monats.* 1898, p. 568.) The urine of a patient with melancholia and stupor, when injected into an animal, caused contraction of the pupil, and in doses of 100 cm. pro kilo caused death with convulsions. There was marked salivation which also occurred after the injection of the substances soluble in alcohol. Normal urine failed to cause salivation. Charrin observed salivation after the injection of the urine of the new born. There is also an increase in the salivary secretion after the injection of muscle or liver extracts. The active principle seems to come from the tissues.

---

#### ACTION OF THE X-RAYS UPON THE HEART.

SEGUY AND QUENISSET.—Action of the X-rays upon the heart. (*Compt. rend.*, 1897, No. 14.) Auto-experiments with the prolonged use of the X-rays caused peculiar cardiac palpitation with general uneasiness. At first there was a feeling of oppression, then palpitation of the heart, and, finally, an unbearable and dangerous arrhythmia. By laying a thick metallic plate over the cardiac area the condition improved.—*From Cent. f. inn. Med.*, 1898, p. 207.

## TREATMENT OF EPITHELIOMA OF THE FACE WITH METHYLENE BLUE.

CLAVELIER AND LAUDREIRE.—Treatment of epithelioma of the face and of the eyelids with methylene blue. (*Therap. Monats.*, 1898, p. 681.) The authors treated fifteen cases of epithelioma of the face with methylene blue: five of these according to the method of Darier (methylene blue, galvano-cautery, chronic acid), the remaining ten with curettage followed by the application of methylene blue in powder or dissolved in glycerine. This last procedure gave the best results. If there was not always a cure, at least there was an improvement. No disfigurement of the face occurred. In all fresh cases, however, extirpation deserves the preference.

## HAVE THE TONSILS AN INTERNAL SECRETION?

After the injection into the auricular veins of rabbits of  $\frac{1}{2}$  to 1 gm. of the aqueous or glycerine extract of tonsils, Masini obtains a rise of pressure from 3 to 4 cm. The cardiac action becomes stronger and slower. There is slight myosis and increased reflex excitability. On account of the presence of numerous similar glands in the tongue the extirpation of the tonsils causes no disturbances, but it might be possible that the symptoms observed in cases of adenoid proliferation, as delayed intellectual development, etc., are to be considered as symptoms of deficiency.—(*Ther. d. Gegenw.* n.s., v. 6, 1898, p. 691.)

## ACTION OF GLYCERINE UPON THE PREGNANT UTERUS.

TAROZZI, E.—Action of glycerine upon the pregnant uterus. (*Archivio di Farmacol.*, 1897, p. 159.) After exposing the uterus of pregnant guinea-pigs during various stages of pregnancy Tarozzi injected  $\frac{1}{2}$  c.c. of glycerine without injuring the fetal membranes, or let it fall drop by drop upon its surface, and found that injections of glycerine into the uterine cavity produced rapid contraction which were intense enough to expel the fetus. This prompt action of the glycerine he believes due to an excitation due to the abstraction of water.—(*From Arch. ital. de Biol.*, v. 29, 1898, p. 230.)

## TREATMENT OF PULMONARY GANGRENE.

WIENER treated successfully a case of gangrene of the left lower lobe of the lung by first resecting the ribs and opening the pulmonary cavity with the pacquelin, after which it was packed with iodoform gauze. The fetid expectoration became at once purely suppurative, and the cavity closed in four weeks. The fistula also closed. The patient within a very short time gained thirty pounds.—(*Ther. d. Gegenw.*, n.s., v. 4, 1898, p. 664.)

## BISMUTAN.

BION.—BISMUTAN.—(*Corresp. Blatt. f. schweiz. Aerzte*, 1898, p. 91.) Bismutan is a canary yellow odorless powder, insoluble in water, and possessing a slightly sweetish taste. It is made from bismuth, resorcin and tannin. Good results were gotten from it in dyspepsia gastro-intestinalis, especially in children, the diarrhoea and vomiting disappearing within twenty-four hours. Dose: Children under two years, 1.5-2.5 in a mixture of 100 gr. mixt. gum. mimosæ, one teaspoonful every two hours. Adults, 0.5-1.0 pro dosi several times a day. No untoward results were seen.

## URO-DIAGNOSIS OF TYPHOID FEVER.

ROBIN.—Uro-diagnosis of typhoid fever. (*Bull. méd.* Oct. 13, 1897) The following characters of the urine may aid in forming an early diagnosis of typhoid fever: (1) A beef bullion color with greenish reflex; (2) Moderate albuminuria; (3) Disappearance of uro-hæmatin; (4) Presence of indican; (5) Persistence or increase of uric acid; (6) Absence of uroerythrine; (7) Marked diminution of the earthy phosphates. These symptoms are only significant when associated, alone they are of no value.—*From Rev. des. Sci. méd.*, v. 52, 1898, p. 27.

## ABSORPTIVE POWER OF THE SKIN.

VALERIO N.—Absorptive power of the skin. (*Atti de R. Acced. dei. Fisiocritici*, 1897, p. 276.) The determination of the acidity of the urine of persons on a constant diet who were placed in baths of various chemicals, shows that in all ages the normal skin is impermeable to aqueous solutions of potassium carbonate and sodium iodide. In some cases where the temperature of the bath was raised there was a diminution of the acidity due to an increase of tissue metabolism.—(*From Arch. ital. de Biol.*, v. 29, 1898, p. 208.)

## ACTION OF THE GROUP N O H.

MODICA, O.—Action of salicylaldehyde, of salicylaldoxime and of acetoxime, as contributing to the knowledge of the action of the group N O H (oxime) (*Annal. di Chim. e di Farmacol.*, 1897, p. 289.) From a comparative study of the action of salicylaldoxime acetoxime and salicylaldehyde upon frogs and dogs, Modica concludes that the oxime group N O H causes convulsions, hypersecretions and circulatory excitation.—*From Arch. ital. de. Biol.*, v. 29, 1898, p. 209.)

## ANTITOXIC POWER OF THE ORGANS TOWARD STRYCHNINE.

ABELOUS, J. E.—Antitoxic power of the organs toward strychnine. (*Comp. Rend. Soc. de Biol.*, 1898, p. 398.) Simply prolonged contact of a strychnine solution with the spinal cord, liver, or especially intestinal tissue will markedly lessen its toxicity. This diminution is probably due to a chemical union of the strychnine, with the protoplasm of the tissue, and a destruction of the strychnine.—(*From Cent. f. Physiol.*, 1898, v. 15, p. 518.)

## PREVENTATIVE ACTION OF THE LIVER AGAINST PHOSPHOROUS POISONING.

CHANTEMESSE.—Preventative action of the liver against phosphorous poisoning (*Soc. méd. des hôp.*, 1897, Feb. 25). If a solution of one-fifth mg. of phosphorus in oil is injected subcutaneously in guinea-pigs, the liver and kidneys become fatty, but if 50 cgm. of hepatic tissue is first mixed with the solution and then let stand three or four hours, and then injected, it does not cause fatty degeneration.—(*From Rev. d. Sci. méd.*, 1898, v. 52, p. 86.)

## ORTHOFORM.

JESSEN (*Deut. Zahnärztl. Woch.*, No. 10) considers orthoform as the sovereign agent for the pains occurring after the extraction of teeth with peridontitis. While cocaine, chloroform and hot water may be ineffectual, yet by the application of orthoform on a moist piece of cotton quiets at once the severest pain.—(*From Therapeut. Monats.*, 1898, p. 698.)

## CASANTHROL.

CASANTHROL is the name given by Unna to a mixture of unguentum caseini with ten per cent. extr. lithanthracis, which has been used in eczema and prurigo. Spread out on the skin it forms quickly a dry elastic covering, but which does not hinder secretion. It can be used in moist eczemas.—(*From Ther. d. Gegenw.*, n.s., v. 4, 1898, p. 647.)

THE *Clinica Moderna* recommends the following for neuralgic pains:

℞ Extr. cannabis ind. . . . . 0.5  
Acid salicyl. . . . . 5.0

M. f. pulv. Divide in part aequal x. S. 2 to 3 powders daily.  
—(*Therapeut. Monats.*, 1898, p. 647.)

## UREA AS A DIURETIC.

GRECO, V.—Urea as a diuretic. (*Reforma Med.* v. 4, p. 15.) On normal persons and some with ascites due to hepatic cirrhosis urea failed to show any marked diuretic action. Only in one case was it marked. The urea was in all cases well borne, even in doses of 20 gm. pro die.—*From Arch. ital de Biol.*, v. 29, 1898, p. 231.)

---

**Physicians' Library.**

---

*Twentieth Century Practice.* An International Encyclopedia of Modern Medical Science. By leading authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In twenty volumes. Volume XVII., "Infectious Diseases and Malignant Neoplasms." New York: William Wood & Company. 1898.

With the seventeenth volume at hand one realises that this great work is nearing its completion, and the publishers are to be commended for the astonishing regularity with which the work has appeared. It was a great undertaking to give the profession such an encyclopedia as this in so short a time. The chief criticism of this class of publications is that they are out of date by the time the last volume is received, but this is certainly not the case in the present instance. As for the volume to hand, it is fully up to the standard of its predecessors, as a glance at the authors will show: Wm. Hallock Park, Assistant Director of Board of Health Research Laboratory, New York, discusses the "Pathology and Bacteriology of Diphtheria." Jacobi writes on the "Symptomatology and Treatment." Habes, of Budapest, writes on "Retanus." W. Rogers Williams, of Bristol, Eng., goes fully into the subject of "Cancer and Neoplasms" generally, although much of this work is also taken up by Coley, of New York. On the whole the volume is bound to please, as it is simply impossible to obtain so up-to-date an exposition as is here found.

---

*A Treatise on Fractures and Dislocations.* For Practitioners and Students. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgery in Cornell University Medical College, New York. In one octavo volume of 823 pages, with 321 engravings and 20 full-page plates. Cloth, \$5.00 net. Leather, \$6.00 net. Just ready. Lea Brothers & Co., Philadelphia and New York.

Although in a certain sense a second edition of the author's two-volume work, now out of print, this book has been so materi-

ally altered and so largely rewritten that it is practically new. The eminent author has condensed his most comprehensive experience into a form adapted particularly to the needs of the student and practitioner, but the work will none the less be a standard reference book for the surgeon and the student of special subjects, who will find the abundant bibliography of indispensable value. It is believed that in the elimination of historical matters, and in the substitution of settled opinions for the previous discussions of divergent views, the directness and applicability of the knowledge presented will increase the favor with which the original work was received. The illustrations have been subjected to equally thorough revision and embrace many new pictures, notably a rich and instructive series of X-ray full-page plates.

---

*A Primer of Psychology and Mental Disease, for use in Training-schools for Attendants and Nurses and in Medical Classes.* By C. B. BURR, M.D., Medical Director of Oak Grove Hospital for Nervous and Mental Diseases, Flint, Mich.; formerly Medical Superintendent of the Eastern Michigan Asylum; member of the American Medico-Psychological Association, etc. Second edition thoroughly revised.  $5\frac{1}{2} \times 7\frac{3}{4}$  inches. Pages ix-116. Extra cloth, \$1.00 net. The F. A. Davis Co., publishers, 1914-16 Cherry St., Philadelphia; 117 W. Forty-second St., New York City; 9 Lakeside Building, 218-220 S. Clarke St., Chicago, Ill. For sale in Great Britain by Sampson Low, Marston & Co., St. Dunstan's House, Fleet St., London, E.C.

This little work is, as it professes to be, merely a primer, but it is so carefully and practically written that it might have more pretentious claims. It will be found very valuable for the class to which it appeals.

---

*Manual of Skin Diseases.* With Special Reference to Diagnosis and Treatment. For the use of students and general practitioners. By W. A. HARDAWAY, M.D., Professor of Diseases of the Skin in the Missouri Medical College, St. Louis. Second edition, entirely rewritten and much enlarged. In one handsome 12mo. volume of 560 pages, with 40 engravings and 2 colored plates. Cloth, \$2.25, net. Lea Brothers & Co., publishers, Philadelphia and New York.

Professor Hardaway's *Manual* in its first edition won the esteem of critical specialists as being a most admirable epitome of





# Scott's Emulsion

is an emulsion of cod-liver oil,

*Which contains the whole oil, all of it.*

It is not a mixture of wine or alcohol with a little iodine and bromine.

It will not intoxicate nor lead to the alcohol habit.

It does not depend upon a stimulant for its therapeutic power.

It is, however, precisely what it claims to be:

*The Best Norwegian Cod-Liver Oil.  
The Hypophosphites and Glycerine.*

Scott's Emulsion is a Food—not a stimulant.

Scott's Emulsion is a Fact—not an experiment.

Scott's Emulsion contains Fat—not a drop of alcohol.

Whenever cod-liver oil and the hypophosphites are indicated, we ask you to prescribe "Scott's Emulsion," always permanent and palatable.

**SCOTT & BOWNE. Toronto**

the practical side of dermatology. Selection and clearness of presentation are the qualities of an accomplished teacher, and these are manifested in an unexcelled degree in the volume at hand. The demand for a new edition has been met by the author with a thorough revision, resulting in a great increase in text and illustrations. The work has been thus brought thoroughly to date and its enlargement has withal been accompanied with a reduction in price, which expresses the publishers' confidence of a widely extended sale.

---

**"PAMPHLETS RECEIVED."**

---

"Death from Diabetes Mellitus." By T. WILSON PARRY M.A., M.B. Reprinted from the *Lancet*, Nov. 26, 1898.

"A Case of Neuromimesis Simulating Perforated Gastric Ulceration." By T. WILSON PARRY, M.A., M.B.

"The Brighton Life Table." By ARTHUR NEWSHOLME, M.D.

"The Milk Supply of Cities, Can it be Improved?" By HENRY O. MARCY, A.M., M.D., L.L.D.

"Christian Science a Sociological Study." By CHAS. A. L. REED, A.M., M.D.

---

**Personals.**

---

Dr. J. D. LAMBERT is opening a new drug store at Elgin, Manitoba.

Dr. HAWORTH, McGregor, Manitoba, has sold his drug business to Messrs. Arkell & Co.

Dr. BROTHERS, Shoal Lake, Manitoba, has sold his drug business to W. H. Speer.

Dr. BRIEN, of Essex, and Dr. J. URQUHART, of Oakville, have been honored by their fellow citizens and given the position of Mayor in their respective municipalities at the recent elections.

Dr. R. ROWAN, Stouffville, Ont., has sold his practice to Dr. Dale, of Myrtle.

Dr. ROWAN is practising in Toronto.