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ECHOES FROM ST. MARY'S CLINIC, ROCHESTER, MINN.

By ERNEST A. HALL, M.D., Victoria, B.C.

**A**BILITY, natural and acquired; absolute truthfulness; and cleanliness and kindness, even to the poorest."

This is the answer which Dr. William W. Mayo, the father of "Will" and "Charlie," gave to the writer in reply to the question, "What are the factors that have contributed in the greatest degree to the unprecedented success of your sons?"

This aged veteran lives again in the lives of his boys, as the shadows lengthen during his eighty-eighth winter. Hale and hearty, with intellect still withstanding the advance of years, and with an active interest in all that has made this village among the cornfields famous. Dr. Mayo, Senior, is reaping the highest reward that is within the power of a parent to receive—the success of those he has brought into the world. No parent ever has had more cause for satisfaction or compliment, for I make bold to say that there are more intelligent worshippers at the shrine which his ability and foresight established than has ever bowed before any earthly monarch. If the education of the child should begin one hundred years before he is born, the Mayo brothers have been fortunate in having their education begun at least forty years before they saw light. William W. Mayo laid the foundation of the present success of his sons in his own sterling character, his independence, and originality. He deserved such boys, and when they came he trained them to habits of hard work, morality and thrift, giving them an opportunity to develop normally.

As an indication of the disciplinary environment of these boys, the father tells that when Will was somewhat younger than he is at present he came home smoking a somewhat cumbersome cigar. His father asked what he was smoking that for, the reply being because the other boys did it. The parental answer was, "Will, do not do things because other boys do them, but do things only because they are right." Suffice it to say that since our arrival in Rochester we have not seen Dr. Will smoking.

A visit to Rochester is not complete without making the acquaintance of this most interesting man. Dr. Mayo, Sr., is an Englishman by birth, studied chemistry under Dr. Dalton, graduated at St. Louis,

practised in Duluth, where he was first chairman of the county commissioners, had charge of the census taking, and filled other prominent positions. He located at Rochester in 1863, at that time a point for recruiting and drafting of soldiers for the war with the south. He was the pioneer surgeon of this state, having done the first abdominal section in Minnesota. Thirty years ago he successfully removed an abdominal tumor weighing sixty-five pounds; also a successful operation for cystocele.

His son Will was an active member of the family before locating in Rochester, but Charlie claims this as his native hearth. The boys were kept always at work, and spent a great deal of their youth upon the farm, as the old gentleman stated "to keep them away from other boys." Will was a lively lad, fond of horses, reflective, if not at times serious. Charlie was a born mechanic. The story of the steam engine that Charlie persuaded his father to buy in order that he might cut the wood and do the washing, the disappointment when the steam from the furnace was found insufficient, the subsequent dissection of said engine by the youthful mechanic, can best be told by the proud father. The domestic atmosphere of the Mayo home was excellent, the boys never quarrelled and always evinced a deep affection for each other, and, even yet, the father said, with a smile, "each thinks the other the best man in the world"—a sentiment in which the many visitors to their clinic can freely concur.

A glance backward reveals these boys dissecting at the slaughter houses, studying comparative anatomy in a most practical manner, and assisting their father in his extensive practice. Charlie learned to give chloroform at the age of nine years, and Will was not behind him in general usefulness in association with the practice. The boys thus absorbed as they grew, surgery became them as much as they became surgeons, hence the lack of artificialness, their ease and grace of action and manner, life and surgery are one to them.

Will was sent to Ann Arbor, and graduated in 1883, and Charlie four years later to Chicago Medical College. Both returned to assist their father, later taking post-graduate courses in London, Germany and various other places. Their father insisted that these courses should be frequent, remarking, "No man is big enough to be independent of others." The hospital for the insane, being situated within easy reach, gave ample material for post-mortem work and dissections, a privilege which was not neglected.

Before saying good night, this worthy man said, "I brought my boys up according to my ideas of right, upon a scientific basis, devel-

oped in simplicity, with the incomprehensible always left out of their thought.''

#### THE CLINIC IN THE CORNFIELDS.

Such is the basis upon which has been built the most unique, elaborate and scientific clinic in the history of medicine. No description can do it justice, no medical course is complete without a period in Rochester, no surgeon can afford to miss the unrivalled facilities afforded by St. Mary's Clinic. The quality of the work here shown, and the advanced treatment demonstrated is only excelled by the extreme kindness and courtesy shown by the Mayos in the extent of their efforts to instruct.

An estimation of their clientele may be had when you are told that from one hundred to one hundred and sixty patients pass through their offices each day; of these about 20 per cent. are surgical and are transferred to St. Mary's Hospital, the others are returned to their regular attendants, as no medical cases are treated. The surgical clinic begins at 8.15 and continues till 1 or 1.30 p.m., and has an average of twelve to fifteen major cases daily.

St. Mary's Hospital is owned and managed wholly by the Sisters of St. Frances. The first building was erected twenty-three years ago for Dr. Mayo, Sr., containing thirty beds. Additions have been subsequently added, until now the capacity is one hundred and fifty beds. There are generally about a hundred patients waiting in the hotels and boarding houses for their turn to enter the hospital. A sanitarium of sixty beds is now being built to accommodate patients after leaving the hospital.

To give an adequate description of the clinics would be impossible. The wealth of material of unusual interest, the almost perfection of diagnostic skill, the marvellous dexterity of the operators, the apparently illimitable fund of information pertinent to each case from which these surgeons entertain and instruct the throng of visiting physicians for five hours each day, and the extreme kindness displayed, are matters of universal comment. Where else can be found such a clinic as this morning presented:—Two carcinoma of breast, umbilical hernia, exophthalmic goitre, tubercular glands of the neck, perforating ulcer of duodenum, acute ulcer of stomach, two appendectomies, osteomyelitis, fibroid of uterus, and ovarian cyst with gallstones, facial neuralgia (extirpation of nerve), osteomyelitis of lower jaw, tuberculous knee, adenoids and tonsils. This is but a sample of the daily clinic. It is not unusual to see three stomach operations in one forenoon, while gallstone cases roll up to the seventeenth hundred.

The perfection of arrangements evince a master hand at the helm. All parts of this vast Mayo machine move with the regularity and precision of well disciplined troops. The pathologist attends all operations, and sections of all tumors, however benign in appearance, are given him, the operation goes on, and in three minutes or less the pathologist's report is given and the course of the operation shaped accordingly. One case is being prepared while the other is in the hands of the operator. There is no loss of time and no fuss, the mass of material has passed through the hands of the most skilful of America's sons, the clock shows five hours spent, and we pass out to our hotel for refreshment, rest, and reflection.

The educative value of this clinic is beyond estimation. With the exhibition of the cases Dr. Mayo teaches independent thinking, a more close observation of each individual symptom, while definite and logical deductions are made. The great mass of stomach cases are those which have passed through the hands of other physicians, as indigestion, returning again and again for stomach tonics, ultimately resulting in some form of invalidism, acute perforating ulcer or malignant disease. The antimortem pathological demonstrations of these cases is possibly the most interesting feature of the clinic. Few of us understood the modern interpretation of stomach symptoms, and fewer still knew how to examine a stomach after having the abdomen opened. The average practitioner has thought that ulceration of the stomach occurred somewhat rarely. When he sees five or six cases of gastric and duodenal ulcer demonstrated weekly in cases whose clinical history presented only symptoms which previously meant indigestion, he is compelled to recast his diagnostic data, and think in terms of organic rather than functional disturbance.

The same may be said with regard to stomach disturbance from gallstones. In fact, it seems that functional dyspepsia is slowly being eliminated by the genius of St. Mary's clinic. It is better for the average man coming here to forget all he thought he knew with regard to the digestive organs, to read carefully their embryological development, then the anatomy of the parts, and then, divested of all previous error and prejudice and with a knowledge of their morphology, build again with material gained at the operating table and from the clinical lectures of Dr. William Mayo. The profession needs a "learn-again" experience in their conception of digestive disturbance. In relation to the stomach, duodenum and liver it stands to-day where it stood twenty-five years ago with regard to the appendix, and thirty years ago with regard to pelvic disease. What Birmingham was to the pelvis, Rochester is to the upper abdomen. It is extremely fortunate that this clinic

is situated so near the centre of this continent that it thus becomes so easily available to the profession in America.

CLINIC FOR OCT. 26.

- I. Appendicitis with secondary infections of tube and abscess of right ovary. Extirpation and drainage.
- II. Removal of chronic indurated appendix.
- III. Anal fistula.
- IV. Post-rectal sinus.
- V. Appendectomy and internal Alexander.

In this operation a long curved forceps is passed between the rectus and its fascid from within outwards until the forceps enters the internal ring, then curving inwards along the round ligament until within two inches and a half of the uterus, where the round ligament is grasped and pulled through the internal ring and out to the median abdominal section. This is then done upon the opposite side and the ligaments fastened in the abdominal wound with catgut.

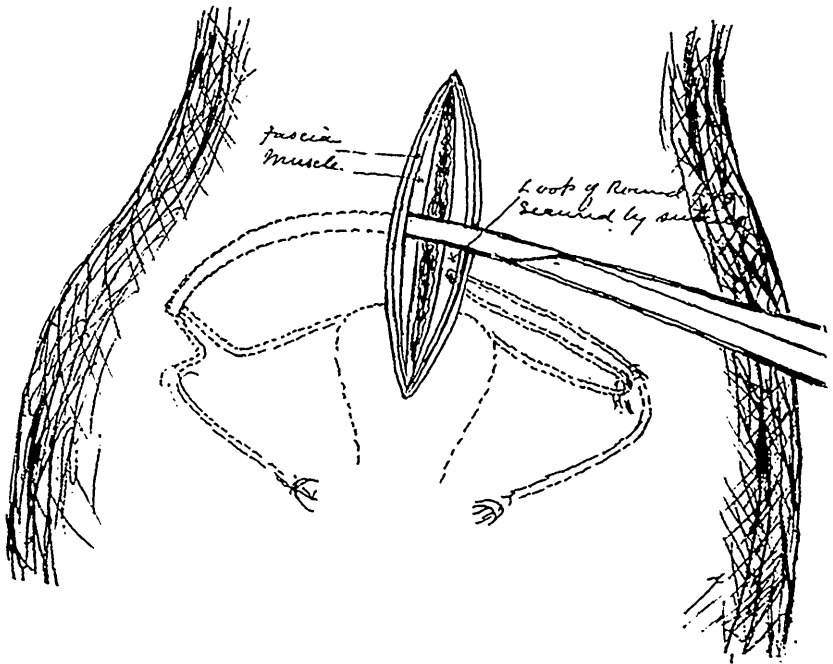


FIG. 1.—The Internal Alexander Operation.

This operation utilizes the strongest part of the round ligament and causes no artificial bands. Objections to the suspension operation are that it frequently fails to hold the uterus in position, it sometimes

is followed by fixation, it forms an artificial band over or under which the bowel frequently becomes strangled.

VI. Removal of small fibroids by myomectomy. Rise of temperature after these cases is due to tying sections too tight. The tissues should not be blanched by the ligature.

VII. Severe and exhausting hæmorrhages from uterus in a young lady are checked by curetting.

The uterus was opened from the fundus anteriorly along the middle line, thoroughly curetted and swabbed with alcohol. Appendages were not disturbed. Dr. Mayo has had several excellent results by this method and always tries it before resorting to extirpation of organs. Internal Alexandra was also done.

VIII. Umbilical hernia. The Mayo flap operation.

IX. Duodenal and gastric ulcers, non-active, the cicatricial indurated condition was plainly visible, both over the anterior portion of the duodenum and the lesser curvature of the stomach. Posterior gastro-enterostomy.

X. Intermittent hydronephrosis, moveable kidney. The kidney was withdrawn and a fibrous band found passing directly across and constricting the ureter at its upper part. This was severed, part of the capsule removed, twisted into a rope and secured through the adjacent muscles. The colon was then raised and stitched to the edge of the quadratus lumborum to fill up the space into which the kidney had sunk.

XI. Carcinomâ of jaw and glands of neck. The usual operation with removal of glands and cautery.

XII. Polypus of sigmoid, diagnosed by sigmoidoscope, fully 13 inches from anus. The bowel was opened, the growth removed, and base cauterized.

An estimate of the value of the clinic may be gained from consulting the last, 1905, report of St. Mary's Hospital:—

Operations on the Stomach .....	217
Operations on the Intestines .....	808
Operations on the Liver, Gall Bladder and Pancreas	329
Operations for Hernia .....	294
Operations on Ovaries and Tubes .....	136
Operations on Uterus .. .....	211
Total intraperitoneal operations .....	2,024
Extraperitoneal abdominal .....	133
Total death rate intraperitoneal, 2.1 per cent.	
Total death rate in non-malignant intraperitoneal operations, 1.7 per cent.	

THE SUTURE IN GASTRO-ENTEROSTOMY IN THE MAYO CLINIC.

The double clamps have been superseded by the triblade Roosevelt clamp, which steadies the parts better and relieves the assistant. The first, or posterior serous suture, is of linen, a simple over and over stitch, the unused end is folded in a piece of gauze and protected as it will be required for the anterior serous suture. The sections in the stomach and duodenum having been made and the redundant mucosa removed, a running lock stitch suture of chromicized gut suture is continued upon the anterior surface, but the stitch is changed to the C. H. Mayo suture.

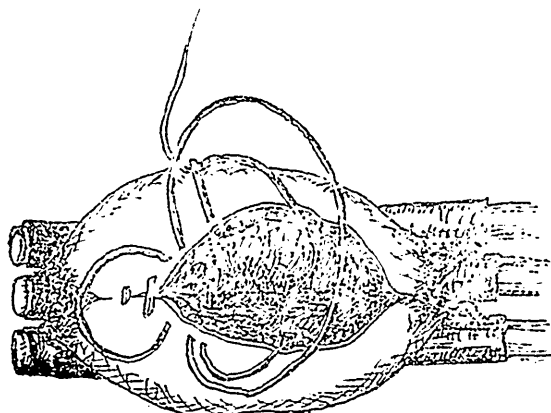


FIG. 2.—Showing posterior button hole lock-stitch in posterior mucous layer, and C. H. Mayo stitch in anterior mucous layer. Both of these perforate all coats of stomach and duodenum. The parts are held in the grip of the Roosevelt triblade clamp.

The parts having been thoroughly cleansed the linen thread is unrolled, and with it a Cushing suture is applied to the anterior serous surface.

There are, therefore, four distinct sutures used by Dr. Mayo in this anastomosis, the posterior serous, a running over and over suture of linen; the posterior mucous, a lock-stitch of chromicized catgut; the anterior mucous, a C. H. Mayo suture of chromicized gut (both of these two latter are of special hæmostatic interest); and an anterior serous Cushing suture of linen.

PREPARATION OF PATIENTS AND METHODS OF STERILIZATION.

The methods of sterilization and treatment in St. Mary's Hospital have been so tersely described by Dr. Gay in an address given before the Surgeons Club that I cannot do better than follow his paper.

When the patient enters the hospital the day before the operation, he is given two ounces of castor oil in lager beer, which disguises the taste, followed by a small amount of beer. A light supper and both are given the evening before the operation, but nothing in the way of food or drink is given the morning of operation. The diet for supper is modified in stomach cases. They get egg-nog or milk only and their stomachs are washed out if there is any obstruction.

All cases are shaved in the preparation room on the morning of operation. Nothing is applied to the shaved surface. They are washed with ordinary soap and water, using only gauze sponges on the operating table, after which the operative field is washed off with Harrington's solution for thirty seconds, and then thoroughly with 70 per cent. alcohol.

Harrington's solution is expected to destroy germ life in thirty seconds. The formula of this solution is:—

Hydrarg. Bichlor. ....	3-2
Acid hydrochloric .....	240-0
Aq. dest. ....	1,200-0
Alcohol .....	2,560

In dirty emergency cases and those with plaster adhering, spirit of turpentine is used to clean the surface. In cases suffering from shock saline solution is given per rectum, about one quart being administered, and this may be repeated. Occasionally brandy is given with the saline solution. Saline is rarely used subcutaneously. A hypo of strychnine is rarely used.

Stomach and goitre cases are given morph., gr.  $\frac{1}{6}$ , one-half hour before operation, and goitre cases get, in addition, atrop. sulph., gr.  $\frac{1}{120}$ .

Hot water is commenced on afternoon of operation, one ounce at a time in ordinary cases. In suture cases of the stomach hot water is commenced in twenty-four hours, beer on the second day, buttermilk on the third, alternating with the beer; toast and light diet on eighth or ninth day, gradually going to solid food. If vomiting is protracted or returns, the stomach is washed out and calomel, gr.  $\frac{1}{4}$ , is given until eight or nine doses are taken. Uncomplicated abdominal cases get one ounce of castor oil on the fourth day. Drainage cases are not usually given castor oil until the seventh day. Soap enemas are given at any time gas becomes troublesome. Seidlitz powder is given in gall bladder cases on the sixth day. Cascara in stomach cases on the tenth day. In cases showing obstructive signs a long rectal tube is used for enemata, first with soap and water, second with magnesia sulph. and glycerine, third with one drachm of alum to a pint of water, fourth, if



stomach is nauseated, it is washed out and castor oil given through the tube. Vaginal or panhysterectomy cases have the evening previous to the operation a vigorous scrubbing with soap and water, followed by bichloride of mercury, 1/3,000, or hot boric acid douche and sponged out with alcohol.

In cancer or infected vaginal cases the douching is followed by packing the vagina with iodoform gauze wet with tincture of iodine, which usually remains five days. This is followed by one or two vaginal douches daily of bichloride solution or creoline. Diet, in these cases, is hot water for twenty-four hours, followed by beer and buttermilk, gruel and milk-toast for three days, in a week general diet.

In protracted vomiting, rectal feeding is resorted to, which consists of beef, milk, gluten, two ounces, hot water, one ounce, repeated every six hours, endeavoring to use also two saline enemas of one quart each in twenty-four hours.

Chloroform is rarely used as an anæsthetic, only when compelled to upon a patient with lung complications, or when the cautery is to be used about the mouth.

Suture materials used are catgut, silkworm gut, horse hair and celloidine linen.

#### METHODS OF STERILIZATION.

*Catgut*.—First, dry catgut in hot air chamber, covering bottom of this chamber with asbestos paper, being careful not to permit the gut to come too near the side wall of the sterilizer on account of causing the gut to become hard or brittle. This is heated slowly, endeavoring to reach a temperature not exceeding 220 F. This should be continued thirty minutes. Secondly, the gut is transferred to an asbestos-lined kettle where it remains in liquid albolene for twenty-four hours. Third, it is then heated in a sand bath carrying temperature gradually to 320 F. in one and a half to two hours, holding at this degree one hour. Fourth, the catgut is kept in sterilized glass jars, containing 1 per cent. of crystal iodine in best Columbian spirits.

*Silkworm gut* is sterilized by boiling with instruments eight or ten minutes, or in a steam sterilizer with dressings for two hours. This is kept in alcohol, 60 per cent., water, 40 per cent., crystal iodine, one per cent.

*Horse hair* is washed in soap and water for five or six days, changing water each day, then put in bichloride, 1/1,000 for twenty-four hours, boiled three minutes, not longer, and kept in the same solution as silkworm.

*Linen* is boiled eight or ten minutes with instruments. Towels, dressings, aprons, etc., are sterilized by steaming two hours, a Scanl - Morris sterilizer being used. Gloves are boiled in plain water and repaired by using Goodrich cement No. 1, Akron, Ohio. Rubber tissue is washed with soap and cold water, rolled in gauze and kept in bichlor. sol. 1/1,000. The iodoform gauze used is purchased already prepared and is sterilized each day before using. The hands of operators are prepared by thoroughly scrubbing with soap and water, then with Harrington's solution, followed by alcohol. The solution in the basin for the hands during operation is 1/4,000 bichloride.

#### MAXIMS FROM ST. MARY'S CLINIC.

Surgery is too serious a matter to use as suggestive therapeutics.

The success of all kinds of quackery depends upon the fact that we have not been sufficiently honest with our patients.

Neurasthenia should never be made the basis of an operation.

In goitre operations be careful not to remove the para-thyroid. It resembles a piece of fat, somewhat harder, and about the size of a Lima bean. Removal is apt to be followed by tetany.

If high pulse rate returns after removal of a part of the gland in exophthalmic goitre, it means that you have not taken enough. Operate again.

The autrum of infection in tubercular adenitis is usually the tonsil. Five per cent. of all tonsils removed here are tubercular.

To enlarge an opening in the direction of right angles to the fibres of the muscle, cut the fascia over the muscle. This will allow the muscle to stretch.

It is better to think wrongly than not to think at all.

The effect of palliative operations is generally pernicious.

We have no license to do mutilating operations because the case is hopeless.

Do not bring surgery into disrepute by operating upon hopeless cases; the friends will generally blame the operation, and other cases will be deterred from seeking early surgical relief.

Strychnine, nitroglycerine and hypodermic syringes have no place in the operating room.

Forty per cent. of "gastric" ulcers are in the duodenum.

The excretory duct of a hollow organ never lies at its lowest level.

Prolonged rest in bed after operations favors phlebitis.

Attacks of pain in the upper abdomen, passing off with vomiting, indicate gallstones.

Attacks of pain preceded by vomiting indicate appendicitis.

Gallstones free in the gall bladder give pain in epigastrium, if located in the cystic or common duct the pain is more frequently to the right side and back.

Have supreme contempt for the surgeon whose methods of procedure upon a given case are different in the presence of the gallery, than if he were alone with his patient.

It takes us a long time to learn to be natural, we are apt to want to do too much.

The ulcers of the stomach that come to this clinic have been "cured" eight or nine times before we see them.

Either remove an ovary or leave it alone, unless in extreme cases. Inflammatory cysts frequently follow conservative operations upon the ovary.

Draw your "conclusions" before your experience is large; that is your opportunity. Those of large experience are very careful of conclusions.

Long confinement in bed after operations may predispose to embolism.

Don't try to close the opening in femoral hernia.

#### THE SURGEONS' CLUB.

An article would be incomplete without mentioning this important feature, which has had a most successful course since its inception, three months ago. The object of the club is to provide a common place for meeting fellow visitors and for the study and discussion of matters of surgical interest. The president and secretary are elected each Monday from among the visiting physicians. Reporters are appointed each day to take notes at the hospital of all work done the following morning; and, at the afternoon meeting, a full report of the clinic is given, all the new and important points discussed. In addition to this discussion, visiting physicians and surgeons, of more or less prominence, are invited to address the club upon matters, as departments in which they are specially interested or in which they have done original work. Frequently members of the hospital or consulting staff give addresses, and occasionally one of the Mayos gives a short lecture. The sessions are intensely interesting and highly profitable, lasting from four to six p.m. By the comparison of notes and the free interchange of ideas the work of the morning becomes more clearly understood and deeply impressed. Arrangements have been made through this club

to have all the Mayos' reprints mailed to each member by his depositing sufficient to pay postage. This is the latest development of the Rochester movement.

NOTES OF LECTURE DELIVERED BY DR. GRAHAM BEFORE THE SURGEONS' CLUB OF ROCHESTER.

Stomach cases fall into three classes clinically. (1) Those with long histories, comprising fully 60 per cent. of the cases. (2) Those of shorter duration, with intermittent severe attacks of pain, eructation, vomiting, etc., with periods of quiescence and comfort. (3) Sudden attack preceded by comparatively good health.

The history generally begins in youth, anæmia, pain, sometimes after food, frequently before food, acidity, eructations, vomiting, some loss of flesh; then an intermission for a few months, then attacks become more frequent, increase of pain, more vomiting, motor power lessened, with hæmorrhage in twenty-five per cent. of the cases if from duodenum, from the bowels; if from the stomach, in vomited matter. The pain is relieved by washing out the stomach by alkaline solutions. These cases go on until relieved by operation, or until they die or develop cancer. Fifty per cent. of cancers of stomach operated upon by the Mayos give this manner of history.

In malignancy, the pain is no greater than in chronic ulcer, but the loss of flesh is more rapid, the anæmia more marked, and the vomiting more persistent.

Ulceration near the pylorus gives pain a few hours after eating. The pain is not due to irritation of food in duodenal ulcer, but to pyloric spasm. The wall of the duodenum being comparatively thin, easily perforates, the area of local peritonitis is large and the pain may be acute.

The diagnosis of ulcer of stomach is easily confounded with ulcer of duodenum, gallstones and appendicitis. In gallstone cases the pain is severe, recurrent, with intermissions of comfort, sometimes lasting months. In ulcer there is usually digestive trouble of a minor degree constant, gas, pain temporarily relieved by food. In gallstone cases the pain is not eased by food. In 85 per cent. of 800 gallstone cases in this clinic, a positive diagnosis was made. In 160 cases of duodenal ulcer 75 per cent. were accurately diagnosed.

It is the surgeon's duty when given a case of appendicitis, gallstones, ulcer of stomach or duodenum, if not finding trouble in any one, to examine the other three regions.

Ulcer and cancer run into each other. In 54 per cent. of cancer cases of the stomach there was evidence of preceding old ulceration. Long cases of ulcer, presenting a sudden increase of symptoms with

commencing rapid emaciation, marks the change from ulceration to malignancy

Analysis of stomach contents is not relied upon to the same extent in making diagnoses as is the clinical history. Neurotics, and patients suffering from pernicious anæmia, tuberculosis, and Bright's disease, give no free hydrochloric acid. "Catarrh of the stomach" is frequently duodenal ulcer. Rapid eating, with imperfect mastication, is the most probable cause of malignancy.

#### ADDITIONAL CASES AND MAXIMS.

The second week at Rochester continues to be but a repetition of the first in the wealth of material, the excellence of clinical demonstrations, and exhibition of the new pathology of the upper abdomen. The rush of medical visitors is also unabated, many fresh from continental clinics who are most enthusiastic in their expressions of pleasure with this clinic, which they say far surpasses anything they saw upon the other side of the Atlantic. As an indication of the volume of work, let me state to-day's list:—Appendix, appendix and gall bladder, cataract, gall bladder and pyloric obstruction, tubercular glands of neck, gall bladder, tumor (sarcoma) of neck, stomach and tubercular peritonitis, double pyosalpinx, club foot, tuberculous elbow, anal cancer of mouth.

The Surgeons' Club has also got down to business, meeting at 8 p.m., as well as 4 p.m. We have organized a course of lectures for the evening sessions, with discussions following. The list for the next week is:—"The Leucocyte," by Dr. Chas. Mayo; "The Preparation of Patients," by Dr. Judd; "X-Ray in the Diagnosis of Kidney Stone," by Dr. Mashger; "The Indications for Cystoscopy," by Dr. Millet. These gentlemen are members of the Mayo staff and specialists in their departments. Thus the visiting physicians are kept busy, and the little western town slowly becoming the greatest post-graduate educational centre of this century, with possibilities practically illimitable.

While Dr. Will excels in his work upon the stomach, duodenum and liver, Dr. Charlie exhibits a versatility most unique, a range of activities from premature baldness to ingrowing toenails, is equally at home removing cataract, goitre or prostate. His dissections are artistic, his clinical lectures most practical and equal to those of his brother. It would be unfair to pass by without noting the Mayos' first assistant, Dr. Judd, a comparatively young man, who takes the work of either of the Mayos during their absence. As a young surgeon, his work is marvellous, in some matters showing a dexterity equal to his teachers.

When one has seen the various activities centered here, the degree of excellence to which diagnostic methods are carried, the extreme pains

which the large staff of specialists take in their various departments, and the master minds controlling this huge machine, he can then understand why the hotels and boarding houses of Rochester find it difficult to accommodate those who wish to be relieved from their burden of pain, and those who seek relief from their load of ignorance. Specialization and cooperation, with the best that can be had in each department, is here the motto. Cannot these principles be tried elsewhere?

We are enjoying at the Mayos' clinic the third revelation within the history of the present generation of surgeons. Thirty years ago Birmingham dispelled the fallacy of pelvic cellulitis, and in its place gave us a new pathology of pus tubes. Twenty years ago America put inflammation of the bowels out of business, and gave us the interesting appendix to juggle with; and to-day catarrh of the stomach, and chronic dyspepsia, through the genius of Dr. Will Mayo, is fast becoming a matter of history, and in their place he is giving a pathology of organic stomach, liver and duodenal disease, as definite and accurate as that which we possess of the lower abdomen. What Lawson Tait was to the pelvis, Will Mayo is to the upper abdomen. To those who doubt and to those who cannot afford to linger among the fogs of exploded theories and explanations, that do not explain, who continue to cover their ignorance by terms that are fast losing their meaning, the voice of St. Mary's clinic is "Come and see." The "fairy tale" description of diseases of the stomach as given by many standard authors resembles the "seein' things at night" experience of the Russian admiral, when he fired on the fishing fleet in the North Sea, more than the actual condition revealed by the ante-mortem demonstrations at this clinic.

The experiences of the Mayos shows that the frequent long histories of dyspeptic trouble preceding the development of cancer is probably that of gastric ulcer, and that there is a transition from ulcer to cancer, that is that cancer develops upon the ulcer base. In 1905, 47 or 49 per cent. had long histories. The pathological report was that in 54 per cent. the evidence was definite that the cancer had developed on an old ulcer base, in 26 per cent. the evidence was fair that the same was true, while eight gave no evidence of preceding ulcer irritation.

If this be the case, that over three-fourths of the cancer cases had pathological evidence of pre-existing ulceration, ulcer of the stomach at once assumes a new surgical aspect, and should receive medical treatment.

Dr. Mayo states that acute ulcer, without severe hæmorrhage, is not a surgical disease; and, while he treats the majority of duodenal and gastric ulcers by gastro-enterostomy, the time is fast approaching when he expects that the method of treatment will be excision.

With respect to gall bladder disease, the opinion is that were neuralgias, gastralgias, cardialgias forever buried, there would be more accurate diagnoses, as these rarely occur as entities, but usually as the result of some stomach or biliary lesion. More than ninety per cent. of the so-called neuralgias of the stomach, where there were few symptoms save sudden pain and occasional vomiting, proved to be gall bladder trouble, while the remaining small number were of duodenal or appendiceal origin.

In uncomplicated gallstone operations the mortality is 2.47 per cent.; if the operation is postponed until jaundice supervenes, the mortality becomes 10.40 per cent. Hence the necessity of early action.

Tumors should not be watched, they should either be removed or let alone.

Cancer is a curable disease if we can remove the primary growth and the lymphatic ducts contributory.

Four out of five of tumors of the breast, at all ages, are malignant, one-half of the balance will become malignant.

Cancer of the breast with supraclavicular involvement is inoperable.

Sixty-two per cent. of ulcer of the stomach appear in men, thirty-eight in women.

Always report the post-mortem findings, for if there is a lesson to be taught it is right that that lesson should travel as far as possible.

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## SURGERY OF THE KIDNEY AND URETER.\*

By W. J. MAYO, M.D., Rochester, Minnesota.

AFTER discussing the embryological development of the kidney and contiguous parts, Dr. Mayo went on to say: When you have a horse-shoe kidney you usually find it in the posterior position. Pretty much all horse-shoe kidneys are low-lying kidneys. They are seldom higher than the region of the umbilicus. Sometimes they come higher than that, but they are always low kidneys. As to blood supply found in the kidney, there are usually two rows of calices. There are usually from six to eight in each row. The anterior of the rows of calices and half of the posterior are supplied by the anterior arteries; the posterior artery supplies the balance. The point is, if you want to get the vascular center of the kidney, you find it about three-fifths of an inch from the anatomical center. The entire top of the kidney gets its supply from the anterior blood vessels. The blood vessels as they divide up

\* Extempore address delivered before the Surgeons' Club, Rochester, Minnesota, November 7, 1906.

always run between the calices so that when you take a kidney that is creased, the blood vessel is in the bottom of the crease; if you cut along that line, the blood will only be from the capillaries; if you cut across the crease, you get the arteries. One of these calices, the lowest one, is the one that is always in the same place, and always has the same relative position in regard to the blood vessels. The only blood vessel, with the exception of the arteries, in the kidneys is the blood vessel which passes up just to the inner side of this posterior calix. If you desired to reach this calix, you would cut up into the posterior side without cutting anything more than capillaries. You could do that with perfect safety.

There is another feature that comes from this question of blood supply which is also very important; that is, that the posterior part of the kidney does not get the same amount of blood that the anterior does, so that, instead of having the same shape, it is larger owing to the greater amount of blood supply. If you wish to get into the calices, cut into the anterior side; if you wish to get into the pelvis of the kidney, cut into the posterior side. In getting at the pelvis of the kidney, one must always recall that the ureter always comes up from below, and it reaches the blood supply, so that in getting at the vascular supply you will always find that the ureter is well supplied, and you can take the ureter and turn it aside, and still have ample blood supply.

The ureter is about ten inches long. It has three points of narrowing: the first one, just about two inches on an average from the kidney, is at the junction of the pelvis and the ureter; the second point is where it crosses the iliac artery; and the third point of narrowing is just outside the bladder. Another peculiarity is in regard to the blood supply. When I was taught, and when I demonstrated anatomy, it was said the ureter had a single artery carried down from the top. As a matter of fact, the ureter is one of the best supplied organs of the body with blood, so that one does not need to be afraid he is going to stop the blood supply of the ureter. It can be cut open the whole length and the shell allowed to drop back, and if it does not turn, there will be no leakage. The practical point is that in the operations on the ureter of this kind, and in surgery of the intestines, I very carefully drain them with rubber tissue, not gauze. When you pull the gauze out, you get an infection which follows down and which will result in fistula. So if you drain these cases, you want to drain them with rubber. If you take a nerve and cut it and put one end in a glass or rubber tube, and put one end of the nerve above and the other below, the one above will grow down; if you take the end of the nerve from below and place it above, the other end will turn around. We have known that this thing takes



place in regard to nerves. The same thing takes place in regard to certain ducts in the body. For instance, if you cut a ureter, instead of resorting to the method of telescoping one end into the other, if you simply take the cut ends of your ureter and suture it correctly and direct its attention to its fellow, they will grow together.

Coming to the function of the kidney. The tubuli of the kidney are drawn out about sixty miles in the loops of Henle. We get two different kinds of infection. We get hæmatoginous infection in which an infection of the blood is cast into the kidney. We see no pus or blood, perhaps only a little irritation, a little albumen in the urine. We used to be taught, for instance, that the kidney was prone to suppuration. This is not so. It was the old methods employed, and especially the use of silk, that caused the infection and suppuration.

We have, then, the two different forms, namely, the hæmatogenous form and the urinogenous form.

Then as to the pathology of the kidney. Take first the question of stones in the kidney, which are probably mostly hæmatoginous, that is, the infection that is carried on is through the excretion of certain bacteria, through the kidney and certain diathesis we get from the stone. The kidney is excreting bacteria. One will find a certain number of bacteria in healthy urine if searched for with sufficient care.

As to stone in the pelvis. In the matter of diagnosis the x-ray will of course be the most material. Then you have certain urinary findings, a little blood, a little pus. These cases have had pain, more or less, for a number of years. If you examine for obstruction of the bowels, one will get in these cases a condition like complete obstruction of the bowels. I have seen a number of cases that have been sent here to be operated upon for obstruction of the bowels. I have seen it in these cases more often than in gall stones or in anything else. There seems to be a peculiar similarity of condition between this and obstruction of the bowels. The difference is only apparent because the bowels will move. Then one would trust more to the x-ray, to the little drop of blood or urine under examination. One cannot tell certain cases of tuberculosis in this part of the kidney, for some reason, from cases of stone in the kidney. The symptoms are exactly alike. I have run across cases of localized tuberculosis, giving rise to exactly the same conditions. In an x-ray diagnosis of stone in the bladder, a great deal depends on the reading of the plate. A great many men can get a good picture, who cannot read a plate. It is an art. It seems to be something that is very difficult to acquire. When it comes to operating, I have to show up the number of stones indicated by the x-ray picture.

Now, as to stone in the kidney, 40 per cent. of them are, as the Irishman says, in the ureter. So, many times when we cut down into the kidney we do not find the stone, and quite likely it was in the ureter. A large proportion of these stones are in one certain portion of the ureter. You remember there are three points of narrowing: the first at the kidney, the second just after it crosses the pelvis, and the third about three-quarters of an inch from the bladder. Now the proportion runs: in sixty cases, you will get about two-fifths of them at the first point, or not quite half. If you found there was no stone in the kidney, and a part of the ureter was dilated, you would start to look for the stone at the point where the ureter was dilated. If you opened it up, you would not have to keep on until you reached the point of dilation. The first thing you would do is to draw the kidney up. Is the ureter reasonably small, or is it dilated below the point of the stone? You then examine to see at which of the points it is dilated. One makes an incision just the same and low like a McBurney operation for appendicitis. It is very easy to find the bifurcation of the iliac, and there you will find the ureter. It is adherent to the peritoneum, and if you are not careful you will tear the membrane. When you find the stone, put in a little piece of gauze and make a pad. I usually put a stitch across. I first make a small incision down until I can see the stone, and then take a needle and thread and make a loop and pull the loop out of the way and take the stone out. I don't think it makes much difference what kind of a suture you use. An ordinary catgut stitch will close the opening you have to make. Don't use gauze, use rubber, if you operate for stone in the pelvis. That brings up a point that we have considered a good deal. I have always been told that going through the kidney and taking a stone out of the pelvis is likely to produce fistula. I think it is all bosh. It sometimes depends on whether there is infection or not. The chances are that you may get a more or less permanent fistula if you cut into the pelvis of the kidney, but it is on account of the drainage. If the urine is fairly clean, you would simply cut down to the stone and sew it up. There is no particular trouble in putting your sutures in to control a large opening or a small one. Don't be too careful in putting in the sutures. This idea that you have to go down so carefully and cautiously is not true. In old times they used to use silk. That is how a good deal of this trouble originated. A catgut stitch which will last five or six days is ample. If the pelvis is dirty, don't cut down to the stone immediately, or you will have a fistula. Leave the posterior portion and cut about three-fifths of an inch from the anatomical centre. Then you will get a long track that is likely to heal.

The next question is one of hypertrophies. The symptoms are pain in the right side, marked by a great deal of vomiting and tenderness, greater on the right side, much more common in women. They will tell you that if they compress their side, for instance with a pillow, it will give relief. You are very liable at first to get these cases mixed up with gall stones or appendicitis cases. In the early stages there is no pus or blood to give definite indications. The pain would indicate equally as much that the trouble was in the stomach. The soreness and tenderness are centered at the base of the twelfth rib. But they will always tell you that they get relief by compressing the side, or by lifting the kidney up. A good many can mechanically relieve the distress in that way. The obstruction is usually at the first point of narrowing. There are very few cases in which you won't find it at that situation. The ureter comes up and makes a little curve. I have operated on 15 or 16 cases of this ureteral stricture. If the urine was fairly clean, I stick a probe down and cut it. I do not stop to place sutures. I happened to have two cases in one week. A physician from Philadelphia was visiting here. He would not believe that it was possible that they would heal. He told me, for instance, that he thought it was reckless surgery. I think while he was here that that old gentleman went to see those patients twice a day. This can be done, however, only with homogeneous structures. In other cases, the parts must be brought together with sutures.

This brings up the question of movable kidney. If you are going to do an operation on the kidney at all, the operation is not to take and harness the kidney up. The kidney sits in a fatty envelope, as is shown in a very clear paper by Reynolds of Boston. The first proposition in movable kidney is not the movability of the kidney, it is the detachment. Some have used a basket and eventually the kidney begins to slip up and down in the basket. When the kidney was first operated upon, the operation was to hitch the kidney up, and then we had all kinds of fool contrivances. The proper thing is to remove the capsule of Garotti, and suture the colon to the muscles behind. If you had a little boy, and you had a cistern in the back yard, and you were afraid the boy would fall into it, you would have the sand man throw in two or three loads of gravel and fill the hole. You would not tie a rope around the boy. Why no one has thought of filling up the hole is hard to say. There should be reattachment of parts.

Another thing in regard to kidney operations that I want to speak of is in connection with tuberculosis of the kidney. We used to be taught that tuberculosis of the kidney was always double, and therefore it was incurable. Occasionally in a case where it seemed to be a tumor

or seemed to be an obstruction you would cut down onto it, and these patients got well if you removed the tumor. Such cases were accidental. We started seven years ago taking up these cases of tuberculosis of the kidney and subjecting them to cystoscopic examination. Dr. Millett has done a good deal of good work with the cystoscope. This is the result. He has found that 85 per cent. of the cases of tuberculosis of the kidney are still confined to one kidney.

When the second kidney becomes involved, the disease works much more rapidly than in the first. The patient is generally in good condition. He still has great powers of recuperation.

The patients come in and say that they have some trouble with their bladder. They have to get up often to micturate in the night. The urine looks dirty. If you tell him to bring you some he may say "I got this the day before yesterday;" or, if you happen to leave the bottle on your stand, it continues to look dirty instead of settling. It is dirty urine. Most any other kind would tend to settle. Now perhaps you get a history that he passes some blood, then this frequent micturation. You question and find usually that he has more pain on one side than the other, and in 85 cases out of 100 the disease is still in one kidney, because when the other kidney becomes infected he goes to pieces so fast he cannot get to anybody. You put in the cystoscope and you notice that the vicinity of one ureter has papules, while the other side is perhaps clear. Having made your diagnosis, having ascertained that the other side is clear, you will read the history. While in one kidney there will be nothing microscopic, around the other kidney there is hardly a section that will not show that there is tuberculosis. What shall we do about the ureter? We have had six or seven of these cases, and we have simply put in six or seven m. of pure carbolic acid and tied it off. It can be compared to an elastic tube. Either fill it with pure carbolic acid, 10 or 15 m., or take it out. You take the kidney out from the back, and leave it hang down back. Loosen it down as far as you can. Turn the patient back as far as you can. Make a little incision. If you find the ureter. If you cannot find it, have someone assist you. Get hold of the ureter and strip; now keep pulling and stripping; keep pulling back and the entire ureter will come out. When you get down to this point, use a catgut suture, and put two stitches in the bladder and sew it up like a hole made with a knife. Don't take out half of the ureter. I don't know of any more pernicious practice. They say, "Well, I did not take out all of the ureter; I left as much as I could." If you are going to leave the ureter, leave it where it is. If it don't heal up, don't leave it where it will spue its contents into the pelvis. I have seen these cases come in with fistulas in all the surrounding parts, simply from

taking out half of the infected ureter. If you leave it, fasten it where you know where it is, so that if you have to operate again you can go down and get it.

One thing more and I am done. I don't want to take up the entire pathology of the kidney. The tumors we have called carcinoma and sometimes sarcoma. Another type found in old people is called hypernephroma. About fourteen years ago Grawitz, a German practitioner, said that it was usually due to misplaced parts of the suprarenal capsule. These tumors are very peculiar. In the first place, you can tell them from the microscopic examination. They look like a rotten pumpkin. They are a sort of a canary yellow. It is a homogeneous material and spreads out like grease. The kidney has not many glands. The lymphatic supply is poor. The infection is carried into the veins. Then you get the secondary stage of hypernephroma and the infection breaks out in various parts of the body. You can cure some of these cases if you get them very early. Usually they follow the blood vessels. In two instances I have gone into a large vein on the right side. Don't turn the cut edges of the blood vessels in, while joining them—turn them out. Leave a sort of a flat point with the two edges of the blood vessel coming up toward you. The best way is to do it with your forceps. Just reach in and catch it. Then you suture it. You have much more latitude in working on the left side on account of the vena cava on the right side. I once stood beside an operator who had the misfortune to enter the vena cava. Before he could do anything the patient bled to death. In another case, I saw the operator take a pair of forceps and close the entire vena cava.

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## THE TRAINED NURSE AND HER INFLUENCE IN THE COMMUNITY.

By S. M. HAY, M.D., C.M., Gynecologist to the Toronto Western Hospital.

**L**ADIES of the *Western Hospital Alumnae Association*,—In the first place, allow me to express my appreciation of the honor you have conferred upon me in selecting me to address you on this occasion. I have been closely associated with the Western Hospital Training School for Nurses ever since its inception, and have watched with considerable pride the course of its graduates, many of whom are now occupying enviable positions of trust and responsibility, in Canadian and American hospitals. It was largely, I believe, through my influence while President of the Toronto Medical Society that its doors were thrown freely open to the lady practitioners of this city. There always has been,

and still is, some doubt in the minds of many as to the advisability of the fair sex entering the medical profession. Not so with the nursing profession, for here the field is practically all your own; and who does not welcome the trained nurse into their homes in time of sickness or suffering? Many more failures would follow the efforts of the physician and surgeon were it not for the skilled co-operation of the nurse, whose timely aid frequently makes all the difference between success and failure, between life and death.

In the limited time at my disposal to-night, I shall only be able to briefly outline some of the ways in which you may influence for good in the community in which you reside. The details I shall leave you to work out at your leisure.

One of the most pressing duties and one of the most exacting aims of the nurse, as well as of the family physician, should be the reduction of the mortality caused by a wrong or a tardy diagnosis of the commoner grave diseases which are frequently met with. We all know that in an emergency, or sudden illness, if a trained nurse is convenient her advice is sought even before the doctor is sent for. How very important it is that her knowledge should be equal to the occasion. And with a very little careful study it may be so. Take, for example, a patient with an intense, sudden, tearing, rending abdominal pain, often severe enough to produce collapse, and usually associated with sharp vomiting. Such a condition is common to a comparatively small class of cases. These are:—(1) Rupture of an ectopic pregnancy; (2) ruptured pyosalpinx; (3) rupture of an appendiceal abscess into the general peritoneal cavity; (4) rupture of a gastric ulcer; (5) rupture of a duodenal ulcer, and (6) rupture of the gall bladder.

Note that all these are ruptures of important organs, permitting the escape of irritating fluids into a healthy peritoneal cavity. You can plainly see that in such a case nothing short of surgical aid will avail. Advise sending for a surgeon at once. Do not give a hypodermic of morphia, and thus so mask the symptoms that the surgeon cannot make an accurate diagnosis. Morphia should never be given until the diagnosis is made and the plan of treatment decided upon. I think it would be well if every nurse had the leading symptoms of some of these commoner diseases written out in her note-book, and then committed to memory.

Now, ladies, this brings me to the most important part of my address. Should you act upon the suggestions about to be given, your influence for good will be felt in your community. You will be a great blessing to womankind, and you will be the means of saving many a life.

Many years of clinical experience has taught us that cancer of the uterus, especially of the cervix, is the most frequent as well as the most fatal form of malignant disease to which womankind is exposed. The reason of this is that the diagnosis is not usually made until the disease is so far advanced that the case is inoperable, or it may not be quite so far advanced, and surgery is resorted to, with the result that many recurrences occur. Examples of both of these conditions some of you have seen with me over and over again during your course. This is not as it should be. Ninety per cent. of those who die annually of this dread disease could be saved by very early diagnosis and operation, and it is just here you must use your influence in educating the people in the early diagnosis of this fatal malady. Cancer is on the increase, and Park's well-known statement may, with advantage, be quoted here: "If the same death rate is maintained for the next ten years, the State of New York will have more deaths from cancer than from tuberculosis, small-pox, and typhoid fever combined." I will again quote a few questions and answers from a paper written by Dr. Dürrssen, of Berlin:—

Q. Why out of 25,000 patients with cancer of the uterus, do 23,000 or 24,000 die every year in the German Empire?

A. Because these thousands come too late to the doctor.

Q. How can these thousands be saved in the future?

A. By coming to the surgeon while the cancer is still confined to the uterus. Under these circumstances it can be cured with certainty by an operation almost free from danger.

Q. What is the duty of the general practitioner towards cancer of the uterus?

A. The general practitioner should regard as cancer every case of whatever age, that comes to him complaining of discharge or bleeding until an immediate examination (during the bleeding if necessary) proves with certainty that no cancer exists. And what is true of the German Empire is approximately true of other countries.

Now the question is, what part can you take, what part are you willing to take, in this crusade against cancer of the uterus? I claim that it is your duty to assist the medical profession in educating the people on the following points:—

1. That every midwifery patient should go to her doctor six or eight weeks after delivery to ascertain her exact condition, and if a laceration of the cervix exists, have it repaired.

2. That cancer of the cervix is essentially a disease of married women. Pregnancy and the trauma of labor play an important part in the after production of cancer. The speaker makes it a rule to ask all his

obstetric patients to come to his office six or eight weeks after delivery, that he may determine the exact position and condition of the uterus.

3. That every kind of discharge or bleeding, be it severe menstrual bleeding, bleeding not connected with menstruation, or bleeding in the menopause, may be the first indications of cancer of the uterus.

4. That cancer of the uterus always leads, or if treated by non-operative methods, to a painful illness and a dreadful death.

5. That cancer of the uterus can be permanently cured by early operation, and that with almost no danger to life.

6. That they must never waste valuable time in trying Viavi or Orange Blossom, or by consulting a midwife, quack, faith-healer, or Christian Scientist.

Never mind if you do frighten the people. You cannot help that; the scare is easier cured than the cancer. Just remember the awful condition of some of these poor women who come to our clinic with their chances for life almost gone. Medical practitioners, medical students and trained nurses should have it impressed upon them that women should be made to understand:—

1. That cancer of the uterus is prone to occur between the ages of 35 and 55. It may, in exceptional cases, come earlier or later.

2. That it is a local growth at first, and curable in its early stages.

3. That irregular and unusual uterine bleeding at any time of life, but more especially between the ages of 35 and 55, is a symptom requiring investigation.

4. That the return of the flow, after the establishment of the menopause, is one of the gravest of symptoms.

5. That leucorrhœa is a symptom of a diseased condition requiring investigation, but too frequently neglected.

6. That change of life means cessation of menstruation, and that increased flow at a time when menstruation is expected to cease is a danger signal.

7. That pain is a symptom which appears late and should not be expected or looked for, as a sign of cancer, in the early stages.

The day before yesterday I saw, in consultation with Dr. J. S. Hart, a lady 65 years old. She had only called in her physician a few hours before I saw her on account of a rather severe hemorrhage. She gave a history of having passed the change of life fifteen years ago. Had enjoyed good health, and looked strong and vigorous when I saw her. She said that for the last seven or eight weeks she had been having a slight watery discharge, on one or two occasions there was a tinge of blood with it. No pain, and not confined to bed till she sent for the



doctor. She did not consider herself ill, although she had not been feeling just as well as usual for some months. On examination we found the cervix uteri almost all eaten away by cancer, and the disease already extending on to the vaginal walls. It was too far gone for radical operation; all that can be done is to palliate and relieve. No doubt there are thousands of such sad discoveries made every year in our own country.

The four symptoms that stand out prominently in cancer of the uterus are: (1) Hemorrhage, (2) discharge (leucorrhœal or watery, and these may precede the hemorrhage), (3) pain, and (4) general constitutional symptoms.

I believe the time is coming when the daily press will come to our aid in educating the public on this subject. The public press is ever ready to publish every new cure that comes out for cancer, and so far these have mostly been useless. Would it not be better to publish the earliest symptoms of cancer, so that the disease might be removed while permanent cure is still possible. It might also save many women from wasting valuable time in quackery, and only coming to the physician when their chances of a radical cure had almost, if not quite, reached the vanishing point.

When the diagnosis of cancer is made there should be no uncertain sound in the warning voice. The facts should be boldly and plainly stated. Even though the information imparted seems cruel in its frankness, valuable time must not be wasted, a valuable life must not be lost; but if a life is to be lost, let it be the patient's suicide and not a moral murder by those who should know better. May you never have the burden on your conscience of allowing a sufferer from uterine cancer to go unwarned or unexamined until the odor from the breaking down of tissues takes voice and cries in vain to the highest heavens for help against the deadly enemy that is gnawing away at the vitals of God's grandest handiwork—Woman.

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## SOME OBSERVATIONS ON THE TOPOGRAPHY OF THE CHEST.

By E. SEABORN, M.D., London.

THE shape of the thorax is that of a cone, and both lungs together are necessarily conical. Each lung is therefore the half of a cone, but the two halves are separated from each other by a considerable interval known as the mediastinum.

Each lung, therefore, presents the surfaces and borders of a demicone. The borders are the anterior and posterior, and the two basal borders—one median, the other external.

The pleuræ are of the same general shape as the lungs, and present the same borders.

Affections of the visceral layer of the pleura only are essentially diseases of the lung substance, so, for the purposes of this paper, the term pleura will be understood to mean parietal pleura.

The anterior border of each pleura begins from one to two inches above the anterior end of the first rib. As both layers lie in close apposition to the lung, by mapping out the apex of the lung by percussion, we map out also the apex of the pleura. The pleuræ here are separated by the trachea and œsophagus, and are defined by curved lines beginning at the sterno-clavicular articulation, and ending one-third of the way out on the clavicle. This portion of the pleura is especially liable to injury in fracture of the clavicle.

From the apex, the pleuræ pass behind the clavicles and rapidly approaching each other, come in apposition at the second costal cartilage, and run down side by side to the fourth costal cartilage. The *right* pleura continues down in a straight line to the sixth costal cartilage, and corresponds to the anterior border of the lung. The *left* pleura, deviating to the left of the middle line, arrives at the sixth costal cartilage also, but is one inch to the left of the middle line. The only place where the pleuræ come in contact is between the second and fourth costal cartilages. The line of contact is nearly always to the left of the median line. This is of importance, as abscesses, which lie between the pleuræ (*i.e.*, in the mediastinum), when they point in front, do so generally to the left of the sternum. Also in infants and children the percussion note just to the left of the upper sternum is duller than the corresponding point to the right of the sternum, as in them the anterior borders of the lung have not expanded, and the mediastinum is uncovered by lung. The left pleura between the fourth and sixth costal cartilages, although deviating from the middle line, does not do so to the same extent as the lung, the pleura diverging one inch and the lung three; as a consequence the two layers of parietal pleura are in contact in front of the pericardium and heart. In percussing the area of superficial cardiac dullness, we percuss through these two layers of pleura. The space between these two layers is known as the pleuro-pericardial sinus. All pleural sinuses may be filled, first, by great dilatation of the lung, as in *emphysema*, or, second, by fluid, as in *pleurisy*. Consequently, the superficial area of cardiac dullness may be obliterated by lung tissue or fluid.

The posterior border begins at the apex of the lung, and runs down about one inch from the midline to the level of the twelfth dorsal spine.

The external of the two inferior borders of the pleura begins in front at the lower end of the anterior border, and runs in a downward curve to the tenth rib in the mid-axillary line. Then to the twelfth rib at the outer

border of the erector spinæ muscle. Then it crosses the middle of the twelfth rib, and joins the posterior border at the twelfth dorsal spine. The twelfth dorsal spine is about one inch below the head of the twelfth rib. The inferior border of the lung does not run down to the lower border of the pleura, consequently the two layers of the parietal pleura are in contact here, forming the costo-diaphragmatic sinus on each side. The right sinus overlies the liver, the left overlies the stomach and spleen. That part of the left sinus that overlies the stomach corresponds to Traubè's space, and the tympanitic note of the stomach is transmitted through the two layers of the pleural sinus. These sinuses may be obliterated by lung tissue or by fluid, and the tympanitic note will then give place to resonance or dullness. McCallum, of London, Can., has pointed out (in the *British Medical Journal* of Feb. 18th, 1905) that Traubè's space may give a dull note in gastroptosis.

By marking out the lower border it will be found that the lowest point is not at the spine behind, but at the tenth rib, just posterior to the mid-axillary line; and it is reasonable to suppose that the first signs of pleurisy with effusion would be found in this position. This is difficult to demonstrate, however, as the dullness of the effusion is merged, on the right side, in the dullness of the liver, and, on the left side, in that of the spleen. When the amount of fluid is over 400 c.c., however, it should always be made out, even in people with very thick chest walls.

The relations of the posterior part of the lower border are of importance to the surgeon. The most necessary consideration is the length of the twelfth rib. The erector spinæ muscle, running up from the sacrum, passes over the twelfth rib. Now, the twelfth rib may be so short that it does not project beyond the outer edge of the erector spinæ, and the ordinary incision in operations on the kidney (*i.e.*, along the erector spinæ up to the twelfth rib) may miss the twelfth rib and pass up to the eleventh, in which case the pleura must be injured. It is well, therefore, to differentiate the twelfth rib by counting, and to make sure that it is of normal length.

The vertebral end of the lower border of the pleura passes in front of the quadratus lumborum and psoas magnus muscles. The parts of these muscles above the diaphragm (*i.e.*, above the ligamenta arcuata externa and interna) are covered by a very thin fascia only, and pus can burrow through this very thin fascia, pass behind the diaphragm, and so get into the posterior wall of the abdomen.

The median lower border joins the lower ends of the anterior and posterior borders, and passes along the angle formed by the diaphragm and mediastinum. It, of course, cannot be mapped out clinically, and, apart from the mediastinal surface, is inessential to our present purpose.

## THE SURFACES OF THE PLEURÆ.

The outer surface lines the ribs and intercostal muscles. The weakest point in the chest wall is in the fifth interspace in the nipple line. Below this, the external oblique reinforces the chest wall, and, above this, the pectoralis major does so. Between the clavicular and sternal parts of the pectoralis major there is a weak spot also, and, in children, an empyema may point here. Another weak spot is in the auscultatory triangle at the lower end of the scapula, where the trapezius and latisimus dorsi separate from each other.

The lower or diaphragmatic surface overlies the liver on the right, and the stomach and spleen on the left side. Pleurisy, limited to these surfaces, may easily be confounded with disease of the abdominal organs and is, in fact, often a sequence of them. When the pleural effusion is large, the liver may be dislocated in a peculiar way. It will be remembered that the suspensory ligament stretches from the diaphragm to the liver, and is attached from the anterior to the posterior border of the liver. It is near the middle line of the body, and directly underneath the mediastinum, and so is attached to that plane of the diaphragm most capable of sustaining weight. Now, when there is effusion into the right pleura, the right side of the liver is pushed downwards, but the left side is pushed upwards, the suspensory ligament acting as a pivot. The liver thus seems much narrower than usual and has often been mistaken for a tumor.

The internal, or mesial, surfaces of the pleuræ lie against the mediastinum, and may be affected by disease, originating in it. It is, therefore, important to know the structures forming the mediastinum. Behind we have the œsophagus and thoracic duct. In front of these we have the trachea above and the pericardium below. That part of the aorta outside of the pericardium passes up on the right side of the trachea, crosses over in front of it, passes backward, and then downward to the aortic opening in the diaphragm. In passing backward it passes so close to the trachea as to produce a bulging inward of the tracheal wall. This bulging overhangs the lumen of the left bronchus and helps to protect it from foreign substances. As the trachea and aorta are bound somewhat firmly together by connective tissue, we have an explanation of the phenomenon of tracheal tugging in aneurism of the aorta. It is said that in aneurism, exaggerated bulging may be made out with the ophthalmoscope. On a plane anterior to the aorta and its branches, we have the great veins of the thorax.

The right pleura lies, in relation to the œsophagus, from end to end of the thorax. It may even pass behind the œsophagus and form a

pleural sinus. Even at the opening for the œsophagus at the diaphragm, although far to the left of the median line, the pleura touches the œsophagus. The left pleura touches the œsophagus at two points only, above the arch of the aorta and at the diaphragm; the descending aorta separates them in the rest of the course. From this it will be seen that the right pleura is the oftener affected by œsophageal disease, especially cancer. Disease of any of the component parts of the mediastinum may occasionally implicate the pleura, such as aneurism of the aorta, abscess of the bronchial glands, malignant endocarditis, and cancer of the thoracic duct, etc.

#### THE LUNGS.

The anterior border corresponds to that of the pleura except over the heart, the lung there not extending to the bottom of the pleural sinus, but leaving the heart uncovered.

The posterior border corresponds to the pleura, but runs down only to the tenth dorsal vertebra.

The inferior mesial border corresponds to that of the pleura.

The inferior curved border extends, in front, to the sixth costal cartilage, to the eighth rib in the mid-axillary line, and to the tenth vertebra behind. The only places where the borders of the lungs can be mapped out with precision are: the right base over the liver, the left base over the spleen, and the apices of both lungs, and, even the borders at the apex are not absolute, although we can determine resonance and increase or decrease in inspiration and expiration.

#### FISSURES OF THE LUNGS.

The main, or oblique, fissure of each lung, begins behind at the second dorsal spine, and ends at the anterior border of the lung, opposite the sixth costal cartilage. This fissure runs in such an oblique direction that it would be almost as well to call the two lobes which it separates the anterior and posterior, instead of the upper and lower. The upper lobe of the right lung is subdivided by another fissure, known as the longitudinal. It begins at the middle of the oblique fissure, that is, near the mid-axillary line, and ends at the fourth costal cartilage in front. In pneumonia the dulness usually corresponds in extent to the lobe in which it is situated, consequently dulness over the back, unless supraclavicular, is to be referred to the lower lobe, while dulness in front is in the upper lobe. On the right side, dulness in front, but below the level of the axilla, is to be referred to the middle lobe. In searching for suspected pneumonia, it is well to percuss in a gentle manner, taking

the upper lobe in front, then the middle lobe if in right side, and then the lower lobe, especially since dulness generally makes its appearance first on a level of the upper part of the middle lobe.

#### THE BRONCHI.

The trachea divides opposite the fourth dorsal vertebra. The right bronchus runs down to a point opposite the fifth, the left opposite the sixth, dorsal vertebra. As the trachea runs down and divides into two branches, the pulmonary artery runs up and also divides into two branches, and, where they meet the bronchi, the arteries lie in front of the bronchi; but, in the lung itself, the artery passes first above and then behind the bronchus. This crossing is at the same level in both lungs. On the left side the artery passes over, before the bronchus has given off any branches. On the right side the bronchus has given off a large branch before the artery has passed over. This bronchial branch is necessarily above the artery, and is, consequently, known as the eparterial branch. It is given off some two inches above the first branch on the left side. This fact is of great importance, as it accounts for the phenomena that there is greater resonance, and vocal fremitus of the upper part of the right lung, and that the respiratory sounds approach the broncho-vesicular. Also, when a foreign body enters the right bronchus it generally passes down far enough to pass the end of the eparterial bronchus, and so allows air to reach the upper part of the lung.

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#### RESULTS OBTAINED FROM THE RADICAL OPERATION FOR CHRONIC PURULENT OTITIS MEDIA.

Dr. E. R. Dench, New York (*Laryngoscope*, Oct., 1906), says that the results obtained by this operation may be considered under three heads: 1. Efficiency of the operation in protecting the patient against intra-cranial complications; 2. Efficiency of the operation in causing a permanent cessation of the otorrhœa; 3. The immediate and remote effect of the operation upon the function of the organ; and 4, the effect of the operation upon the integrity of the facial nerve.

Dench reports 193 cases, with 131 cures; of the remainder, 29 have slight discharge, 5 profuse discharge, 2 still under treatment, 6 fatal cases, 20 result unknown. Out of 111 cases in which a record of the hearing was kept, hearing was good in 99, fair in 9, and bad in 3. None of the deaths could be attributed to the operation. Of the last 95 cases, facial paralysis occurred in 4, and there has been a subsequent restoration of function in all.

## PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills, Quebec.

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The proceedings of the last meeting of the College of Physicians and Surgeons of the Province of Quebec have not yet been published, but the following is a resumé of the work accomplished :

The treasurer's semi-annual report showed a balance of \$3,032.23 in the bank. The question of a tariff for medical examinations for insurance companies and friendly societies was discussed after the minutes had been read, and when the views of all the members had been expressed it was resolved, that the Governors of the College of Physicians and Surgeons should give all their moral support to the demand that such fees in future should amount to two dollars in the case of mutual societies, and five dollars in the case of insurance companies.

The third order of business was a motion by Dr. Lessard that the number of Governors should be reduced to twenty-five. This motion was lost by twenty votes.

The next matter of importance was the question of reciprocity between Britain and the Province of Quebec. Dr. Lafleur read a letter from Dr. McAlister, in favor of reciprocity, and M. Laurendeau replied in a letter to the following effect: He believed that the Province of Quebec had nothing to gain by this free interchange of medical men, that it was but a fool's bargain, seeing that the current of migration was towards Canada from England and not vice-versa; but that he did not insist upon this, as it concerned the English-speaking practitioner more than the French. But he considered it important in another sense, in that we desired reciprocity with Ontario, and if the other Provinces fell in with this idea they would all be placed upon the one level and reciprocity would be complete. Why, then, not wait until Ontario took the lead—before adventuring into this hornets' nest? If what Dr. McAlister said was correct, he feared that Ontario would refuse to enter into the movement until a central board of examiners had been created here. He believed that for these reasons they should let Ontario take the initiative. The question was left over for six months.

Many amendments were proposed for the medical law of the Province. Among others, Dr. Laurendeau, seconded by Dr. Daignault, proposed the establishment of a central examining board for Quebec.

Dr. Simard strongly opposed the motion, stating that England, France, Germany, Italy and Belgium had no such system, and that the United States and Ontario alone had it. He personally was in favor of a representative from the college who should question the students at the

same time as the examining professor. He believed that the colleges had sufficient influence in Parliament to negative any attempt in this direction, as many of the leaders were old pupils of those universities who opposed the change, and that they would undoubtedly stand by their old alma mater on questions of this kind. He was not opposed to a board which would examine students who wished to practise in Ontario.

Dr. Lachapelle expressed himself as being always in favor of such a board, and could not see what the universities would lose in the event of the board being chosen; without a board with full powers, he thought that nothing could be done in regard to reciprocity with Ontario.

Dr. Daignault thought that he was quite safe in stating that the District of St. Hyacinthe was in favor of a central board of examiners, and did not see that there was any argument against such a board in stating that the United States found it to be the best plan.

Dr. Brochue, speaking in the name of Mgr. Matthieu, rector of Laval, said that he was utterly opposed to any such legislation.

Dr. Normand declared himself very much in favor of the proposed change, and saw no reason why the step should not be taken, seeing that it was only the universities against the whole profession.

After further discussion and several amendments being made and rejected, the main motion was put and lost, sixteen voting for and twenty against.

With little or no discussion, the following motions were carried:

To increase the curriculum of studies at the universities from four to five years.

To amend the Tachereau Bill.

To define more completely the powers of the council of discipline.

To define more clearly the Medical Act in reference to the illegal practice of medicine.

To grant help to the medical societies of the Province and make amendments acceptable to the board.

To change the corporative name of the College of Physicians and Surgeons of the Province of Quebec.

A scheme of settlement providing for the nomination of a single executive officer.

The same committee was entrusted with the power to modify and present the above-mentioned amendments before the Legislature.

It has practically been decided that the Montreal General Hospital is to have a new building added for heating, lighting, and laundry plants. When completed the risk of fire will be materially lessened, both from the nature of the building and the fact that it is to be erected upon a piece of land formerly used as a lumber yard. The land is situated on



the south side of Lagauchetiere street, and has an area of 18,000 feet, the price paid being \$18,000. The addition to the nurses' home is nearing completion, and accommodation will soon be ready for twenty more nurses. The addition takes the form of another story, and cost \$14,645.

The following cases were reported at the Montreal Medico-Chirurgical Society :

Two specimens of tubal pregnancy. Dr. Laphorn Smith.

Cardiac Thrombi. Dr. R. C. Patterson.

Differentiation and treatment of heart action. Dr. Morrow.

Tetanus following vaccination. Drs. England and C. B. Keenan.

Tetanus with recovery. Dr. Cumming.

Congenital dislocation of the humerus in an infant. Drs. White, Forbes, and Russel.

Pubiotomy. Dr. Evans.

Primary carcinoma of the appendix. Drs. Garrow and Keenan.

The so-called infantile paralysis. Dr. Forbes.

Intermittent hepatic fever. Dr. Garrow.

The regular meeting of the District of St. Francis Medical Association was held in the Monument National, Sherbrooke, on November 14th. The attendance was moderate, and several items of interest were brought before the members. The reports upon cases in practice proved as usual one of the most interesting features of the meeting. Dr. Darche read a paper on adenoids, and Dr. Lynch was on the programme for a paper on blood poisoning. After hearing reports from some of the sub-committees the meeting adjourned.

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The following is from the *Montreal Medical Journal* regarding the cost of medical education in London:—"According to a recently published estimate, the expenses of the medical student in London may be figured about as follows: On entering one of the large medical schools the bare fees will amount to £30 per annum, with an addition for the first years of £20 entrance fee—that is to say, £170 to cover the five years. To this must be added the fees for certain additional and necessary practical classes and material, entailing an extra cost of perhaps 12 or 15 guineas. Subscriptions to the students' club will absorb another 15 guineas, and books, instruments, etc., say, £30 more. When examination fees, say 40 guineas, are added, and the official register fee, £5, we get roughly £280; pocket money and lunch in town mean quite another £25 to £30 annually, while putting clothes, board, lodging, etc., at £85 to £100 a year, we reach a total of £850 to £900, if the student gets through in the five years."

## CANADIAN MEDICAL ASSOCIATION.

REPORT OF SPECIAL COMMITTEE ON RE-ORGANIZATION, TORONTO,  
AUGUST 20TH, 1906.

*Draft of Proposed New Constitution and By-Laws.*

## CONSTITUTION.

## ARTICLE I. TITLE.

This society shall be known as the Canadian Medical Association.

## ARTICLE II. OBJECTS.

The objects for which the Association is established are the promotion of the medical and allied sciences and the maintenance of the honor and the interests of the medical profession by the aid of all or any of the following :—

(a) Periodical meetings of the members of the Association, and of the medical profession generally, in different parts of the country.

(b) By the publication of such information as may be thought desirable in the form of a periodical journal which shall be the Journal of the Association.

(c) By the occasional publication of transactions or other papers.

(d) By the grant of sums of money out of the funds of the Association for the promotion of the medical and allied sciences in such manner as may from time to time be determined.

(e) And such other lawful things as are incidental or conducive to the attainment of the above objects.

## ARTICLE III. MEMBERSHIP.

The Association shall be composed of ordinary and honorary members. Ordinary members must be regular practitioners in some Province of the Dominion of Canada. Honorary members must be persons who have distinguished themselves and risen to pre-eminence in Medicine, the Allied Sciences, in Literature or in Statesmanship.

## ARTICLE IV. AFFILIATED SOCIETIES OR ASSOCIATIONS AND BRANCH ASSOCIATIONS.

All Provincial, Inter-Provincial, County, City or District Medical Societies or Branch Associations at present existing in the Dominion of Canada, or which hereafter may be organized in the Dominion of Canada, may, by special resolution of said Medical Society or Association, become branches of or affiliated with the Canadian Medical Association by subscribing to its Constitution, By-laws, and Code of Ethics.

## ARTICLE V. EXECUTIVE COUNCIL.

The Executive Council shall be the business body of this Association. It shall consist of delegates elected by the affiliated societies or associations or branches, by the Dominion and Provincial Boards of Health, and by the Canadian Medical Association as hereinafter provided for in the By-laws. It shall elect all the officers of the Association, except the President, by ballot, and transact all the general business of the Association. The President and General Secretary shall be members of the Executive Council and they shall act in the capacity of President and Secretary of the same.

## ARTICLE VI. SECTIONS.

Sections may be provided for by the Executive Council, or as hereinafter provided for in the By-laws.

## ARTICLE VII. MEETINGS.

The meetings of the Association shall be held annually, at such time and place as may be determined by the Executive Council. Special meetings of the Executive Council shall be called by the President upon a written requisition stating the objects of such meetings and signed by twenty members of the Executive Council.

## ARTICLE VIII. OFFICERS.

Sec. 1.—The General Officers of this Association shall be a President, a Vice-President for each of the Provinces of the Dominion of Canada, a Local Secretary for each of the Provinces of the Dominion of Canada, a General Secretary, and a Treasurer. The President shall be nominated by the Council and elected by the Association in general session.

Sec. 2.—The offices of General Secretary and Treasurer may be held by one and the same person.

Sec. 3.—These officers, excepting the President, shall be elected annually by the Executive Council to serve for one year or until their successors are elected and installed in office.

Sec. 4.—The Treasurer shall give a bond to the Finance Committee for the safe-keeping of all the funds in his possession and for their proper use and disposal.

#### ARTICLE IX. FINANCE COMMITTEE.

The Executive Council shall annually appoint five of its members as a Finance Committee, which shall also be a Publishing Committee, and whose duties will hereinafter be provided for in the By-laws.

#### ARTICLE X. FUNDS.

Funds for the purposes of the Association shall be raised by an equal annual assessment of \$5.00 upon each Ordinary member; from the Association's publications, and in any other manner approved of by the Finance Committee. These funds, from whatever source derived, are to be transferred to the Treasurer, by him deposited in some responsible banking institution, and only paid out by him on the order of the General Secretary and the Finance Committee, through its chairman.

#### ARTICLE XI. AMENDMENTS.

No amendments to any of the foregoing articles or sections thereof shall be made unless due notice has been given in writing to the General Secretary at the previous annual meeting. Any such notice of motion must be laid by that officer before the Executive Council and sanctioned by a three-fourths vote of that body before it is adopted as a part of the Constitution.

#### BY-LAWS.

##### ARTICLE I. MEMBERSHIP.

###### *Section I. Membership. How Obtained.*

A member in good standing of an affiliated medical society or association may become a member of the Canadian Medical Association by presenting to the General Secretary:—(1) A certificate of membership in good standing in an affiliated or branch society or association, signed

by the president and secretary thereof; (2) written application for membership on the approved form; (3) payment of the annual subscription. In the absence of membership in a local association or branch a candidate may be elected to membership by the Council on the nomination of two members from personal knowledge.

### *Section II. Membership. How Retained.*

So long as a member conforms to the By-laws of the Canadian Medical Association he retains his membership therein.

Any member who fails to conform to the By-laws and whose subscription shall not have been paid on or before the 31st December of the current Association year shall, without prejudice to his liability to the Association, be suspended from all privileges of membership, and at the end of the succeeding year, if the arrears be still unpaid, he shall *ipso facto*, cease to be a member. No member shall (except in case of his death or expulsion or of his ceasing to be a member under the previous provisions of this article) cease to be a member without having given previous notice, in writing, on or before the 1st December in the current year to the Secretary of the Association of his intention in that behalf, and having paid all arrears of subscription (if any) due by him.

### *Section III. Membership. How Restored.*

Any delinquent member having once failed to comply with the sections of this article, unless absent from the country, shall have his name erased from the Register of Members of the Canadian Medical Association, and shall not be restored to membership until all his dues have been paid and satisfactory evidence produced that he retains his membership in an affiliated society or association, if admitted through such channel.

## ARTICLE II. REGISTRATION OF MEMBERS.

No member shall take part in the proceedings of the Association, nor in the proceedings of any of the sections thereof until he has properly registered his name and paid his annual dues for that and previous years.

## ARTICLE III. GUESTS AND VISITORS.

Sec. 1.—Medical practitioners residing outside of Canada and other men of science of good standing may be received by invitation of the Canadian Medical Association, the Executive Council, the President, or

any one of the sections or at the discretion of any of these on a letter of introduction from an absent member of the Association. They may, after proper introduction, be allowed to participate in the discussions of a purely scientific nature.

Sec. 2.—Medical students may be admitted to either the general meetings or to the meetings of any of the sections thereof, but shall not be allowed to take part in any of the proceedings. They shall be vouched for as such students by some member of the Association to either the General Secretary or Treasurer.

#### ARTICLE IV. HONORARY MEMBERS.

Honorary members shall be elected unanimously by the Executive Council.

#### EXECUTIVE COUNCIL.

##### ARTICLE I.

Qualifications for Representatives on Executive Council.

Sec. 1.—No one shall serve as a member of the Executive Council who has not been a member of the Canadian Medical Association for at least two years.

Sec. 2.—Members of the Executive Council shall be elected for one year.

Sec. 3.—Every affiliated Medical Society or Association shall be entitled to elect one delegate to serve on the Executive Council for its membership from fifteen to fifty; two delegates for its membership from fifty-one to one hundred and fifty; three delegates for its membership from one hundred and fifty-one to three hundred, and thereafter one delegate for every three hundred of a membership above three hundred; provided that no one delegate shall represent more than one affiliated society or association to which he may belong.

Sec. 4.—At the first general session of each and every annual meeting of the Canadian Medical Association, fifteen members thereof, who shall be present at that session, shall be elected by ballot to act on the Executive Council for one year; provided that any one already elected a delegate by an affiliated society or association shall not be at that meeting elected a member of the Executive Council. The President of the Association shall name three tellers to conduct this ballot. The fifteen having the greatest number of votes shall be declared elected.

Sec. 5.—Every three years the Executive Council shall appoint a committee of five to examine the registers of membership of all affiliated societies or associations and so apportion the number of delegates entitled to be elected by each society.

Sec. 6.—Every delegate from an affiliated society or association shall be required before acting on the Executive Council to have entered his name on the Annual Register of the Canadian Medical Association, paid his annual subscription to the Association and deposited a certificate with the General Secretary of the Association, duly signed by the President and Secretary of the affiliated society or association from which he has been elected a delegate.

## ARTICLE II. ORDER OF BUSINESS.

Sec. 1.—The following shall be the order of business in the Executive Council, which can only be changed or departed from by an unanimous vote of that body:—

- I. Calling the meeting to order by the President.
- II. Reading the minutes of the previous session.
- III. Reports of officers.
- IV. Reports of Committees.
- V. Unfinished business.
- VI. New business.

Sec. 2.—The Rules of Order which govern the proceedings of the House of Commons of Canada shall be the guide for conducting the sessions of the Executive Council.

Sec. 3.—Ten members of the Executive Council shall constitute a quorum for the transaction of business.

Sec. 4.—It shall be the privilege of chairmen of Committees and members of the Executive Council to report to the Executive Council, and they shall have the right to discuss their own reports.

## ARTICLE III. MEETINGS OF THE EXECUTIVE COUNCIL.

Sec. 1.—The meetings of the Executive Council shall be held on the dates of the annual meeting of the Canadian Medical Association, but not until after the first general meeting of the Association, and then not at the time of any general meeting of the Association.

Sec. 2.—As provided for in the constitution, the President of the Association shall be the President of the Executive Council and the General Secretary shall be the Secretary of the Executive Council.

#### ARTICLE IV. NOMINATIONS, ELECTIONS AND INSTALLATION OF OFFICERS.

Sec. 1.—Nominations. Any five members of the Association may hand to the General Secretary, in writing, the name of any member of the Association whom they may wish to nominate for any office, except in the case of the Finance Committee, which shall in all cases be elected by and from the members of the Executive Council, or any member of the Executive Council may nominate any member of the Association for any office.

Sec. 2.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect a candidate. Should there be more than two nominees for any position, the one having the lowest number of votes shall be dropped and a new ballot proceeded with. This procedure shall be continued until one of the nominees receives a majority of all votes cast, when he shall be declared elected.

Sec. 3.—The election of officers shall take place at any meeting of the Executive Council, and the exact time for same shall be fixed by the Executive Council.

Sec. 4.—The President shall appoint three tellers to conduct the ballot.

Sec. 5.—The Executive Council shall annually decide on the number of general addresses to be given at the succeeding annual meeting and shall elect the readers to deliver the same. In default thereof on the part of the Executive Council this duty shall be discharged by the President.

Sec. 6.—Installation. The President-elect shall be installed by the retiring President at the first general session of the annual meeting of the Association succeeding the one at which he was elected.

#### OFFICERS AND COMMITTEES.

##### ARTICLE I. DUTIES OF OFFICERS.

Sec. 1.—President. The President shall preside at general meetings of the Association and at meetings of the Executive Council. He shall deliver the annual Presidential address at either the first or second general session of the annual meeting, held under his presidency, as he may decide. In the absence of the President, the Vice-President for the Province in which the meeting is held shall perform the duties, or.



in his absence, the meeting shall select a Vice-President. The President shall appoint annually a Committee of Arrangements consisting of five members who shall reside in the place at which the Association is to hold its annual meeting. He shall also name the Chairman of this Committee.

Sec. 2.—The President shall be an *ex-officio* member of all committees.

Sec. 3.—In case of the death or resignation of the President the Vice-President for the Province in which the annual meeting is to be held shall become the President.

## ARTICLE II. VICE-PRESIDENTS.

The Vice-Presidents shall assist the President in the discharge of his duties at his request.

## ARTICLE III. GENERAL SECRETARY.

Sec. 1.—The General Secretary shall also be the Secretary of the Executive Council of the Association. He shall give due notice of the time and place of all annual and special meetings by publishing the same in the official journal of the Association, or if necessary in the opinion of the Finance Committee, by postal card to each member. He shall keep the minutes of the General Sessions of the annual meetings of the Association, and the minutes of each meeting of the Executive Council, in separate books, and shall provide minute books for the secretaries of the different sections, which he shall see are properly attested by both chairmen and secretaries thereof. He shall notify members of committees of their duties in connection therewith. Where necessary or deemed advisable by the President, he shall conduct correspondence with other organized medical associations or societies, domestic or foreign. He shall preserve the archives, the published transactions, essays, books, journals, papers and addresses of the Association. He shall see that the official programme of each annual meeting is properly published and shall perform such other duties as may be required of him by the President or Finance Committee.

Sec. 2.—The General Secretary shall be *ex-officio* a member of all Committees.

Sec. 3.—For his services the General Secretary shall receive a salary which shall be fixed by the Finance Committee.

Sec. 4.—The General Secretary may also be elected to the office of Treasurer.

Sec. 5.—All his legitimate travelling expenses to and from the annual meetings and other places ordered by the Finance Committee shall be paid for him out of the funds of the Association.

#### ARTICLE IV. LOCAL SECRETARIES.

The Local Secretaries shall assist the General Secretary at the annual and special meetings and shall perform the duties of corresponding secretaries for the respective provinces they are elected to represent; these duties shall be performed under the direction of the General Secretary.

#### ARTICLE V. TREASURER.

Sec. 1.—The Treasurer shall receive and collect the annual fees and demands of the Association from the members. He shall be the custodian of all monies, securities and deeds belonging to the Association, and shall only pay out moneys on an order drawn by the General Secretary and approved by the Finance Committee, whose chairman shall also sign all such orders.

Sec. 2.—The Treasurer shall give to the Finance Committee a suitable bond for the faithful discharge of his duties, and shall receive for his services a salary to be fixed by the Finance Committee.

Sec. 3.—The Treasurer may also be elected to the position of General Secretary.

Sec. 4.—When the offices of General Secretary and Treasurer are filled by one and the same person, it shall be the duty of the Finance Committee to appoint a collector of dues and subscriptions at each annual meeting, who shall be responsible to the Finance Committee.

#### ARTICLE VI.

All the officers shall discharge the duties of their respective positions until the completion of the business and scientific proceedings of each meeting.

#### FINANCE COMMITTEE.

##### ARTICLE I. APPOINTMENT AND DUTIES OF THE FINANCE COMMITTEE.

Sec. 1.—The Finance Committee as set forth in the constitution shall consist of five members annually appointed or elected from the members of the Executive Council. This Finance Committee shall have charge of all the properties of the Association and of all the financial affairs of the Association. It shall elect its own chairman. The chairman may then appoint any sub-committees that may be necessary or

desirable in connection with the finances of the Association. This Committee shall have charge of the publication of the official journal of the Association, and of all published proceedings, transactions, memoirs, addresses, essays, papers, programmes, etc., of the Association. It shall have power to omit, in part or in whole, any paper or address that may be referred to it for publication in the official journal of the Association, by the general meeting, the Executive Council, or any of the sections. It shall appoint an editor and a managing editor of the official journal, who may be one and the same person if by them deemed advisable, and shall define the respective duties and responsibilities of each. They shall also appoint such assistants as may be deemed necessary for the proper conduct of this official journal, and shall determine their salaries and the terms and conditions of their employment. The Finance Committee shall have the accounts of the Treasurer audited annually or oftener if desirable, and shall make an annual report on the same to the Executive Council. The Finance Committee may meet when and where they may determine, and the chairman shall call a meeting on the request of three members in writing, and three members of the Finance Committee shall constitute a quorum for the transaction of the business of the Finance Committee.

Sec. 2.—The President and General Secretary shall be *ex-officio* members of the Finance Committee, and the General Secretary shall act as the Secretary of the Finance Committee.

Sec. 3.—Any donations recommended by the Executive Council shall be paid only with the approval of the Finance Committee.

## COMMITTEES.

### ARTICLE I. CLASSIFICATION OF COMMITTEES

Sec. 1.—There shall be (a) Standing, (b) Special, and (c) Reference Committees.

Sec. 2.—Standing Committees. The Standing Committees shall be the following:—A Finance Committee, a Committee of Arrangements.

Sec. 3.—The Finance Committee shall be appointed by the Executive Council, and its members shall always be appointed or elected from amongst the members of the Executive Council.

Sec. 4.—The Committee of Arrangements shall be appointed by the President. They shall be residents in the place in which the annual meeting is to be held, and the chairman thereof shall be named by the President.

Sec. 5.—The Committee of Arrangements shall be required to undertake to provide for transportation, a hall or halls for meeting pur-

poses, a hall for Executive Council meetings, halls for section work, rooms for committees, rooms for general secretary and other secretaries, room for registration, room or rooms or halls for exhibition purposes.

Sec. 6.—The General Secretary shall act in an advisory capacity to the Committee of Arrangements.

Sec. 7.—The Committee of Arrangements shall have power to add to its numbers and shall name all the Reference Committees as well as the chairmen thereof.

## ARTICLE II. SPECIAL COMMITTEES.

Special Committees may from time to time be appointed by the Executive Council; they may be named by the President on the authority of the Executive Council. They shall perform the duties for which they were called into existence and shall in all cases report direct to the Executive Council as hereinbefore provided.

## ARTICLE III. REFERENCE COMMITTEES.

Sec. 1.—The Executive Council shall at its first meeting appoint all the Reference Committees and name the chairmen thereof. Their titles shall be as follows:—(1) A Committee on Sections and Section work; (2) a Committee on Medical Legislation; (3) a Committee on Medical Education; (4) a Committee on Hygiene and Public Health; (5) a Committee on Amendments to the Constitution and By-laws; (6) a Committee on Reports of Officers; (7) a Committee on Credentials; (8) a Committee on Necrology.

Sec. 2.—The General Secretary shall notify each member of these committees so appointed of his duties.

Sec. 3.—Committee on Sections and Section Work. The Committee on Sections and Section Work shall secure papers for the sections. It shall report to the President or to the Executive Council when required.

Sec. 4.—Committee on Legislation. To the Committee on Legislation shall be referred all matters pertaining to local and federal Medical Acts. It shall report to the President or to the Executive Council when required.

Sec. 5.—Committee on Medical Education. To the Committee on Medical Education shall be referred all matters pertaining to medical colleges and medical education. It shall report to the President and Executive Council when required.

Sec. 6.—Committee on Hygiene and Public Health. To the Committee on Hygiene and Public Health shall be referred all matters relating to hygiene, public health, etc. It shall report to the President or to the Executive Council when required.

Sec. 7.—Committee on Amendments to the Constitution and By-laws. To the Committee on Amendments to the Constitution and By-laws shall be referred all matters relating to the subject, before action thereon by the Executive Council. It shall report to the Executive Council when required.

Sec. 8.—Committee on Reports of Officers. To the Committee on Reports of Officers shall be referred the President's address, the report of the General Secretary and the report of the Finance Committee before submission to the Executive Council.

Sec. 9.—Committee on Credentials. To the Committee on Credentials shall be referred all questions regarding the registration and credentials of delegates before submission to the Executive Council.

Sec. 10.—Committee on Necrology. To the Committee on Necrology shall be assigned the duty of collecting, as far as possible, the obituaries of members dying since the last annual meeting. These shall be duly filed by the General Secretary. The committee shall report on the call of the President at the last general session of each annual meeting.

Sec. 11.—Three members shall constitute a quorum of any reference committee, and all reports shall be made as hereinbefore provided.

## SCIENTIFIC WORK.

### ARTICLE I. GENERAL MEETINGS.

Sec. 1.—Date of Meetings. The date of each annual meeting shall be fixed by the President on the advice of the Committee of Arrangements.

Sec. 2.—Time of Meetings. The general meetings or sessions shall be held at 10.30 a.m. and 7.30 p.m. of the first day of any annual session and at 7.30 p.m. on the subsequent days. The President shall preside at all general meetings, and in his absence, or at his request, one of the Vice-Presidents.

Sec. 3.—The President shall deliver his annual address at one of the general meetings of the first day, as he may determine. The time of the deliverance of all other general addresses shall be arranged for by the Committee of Arrangements.

Sec. 4.—The order of business of the first general session of each annual meeting shall be as follows:—

1. Calling the meeting to order by the President.
2. Prayer; by some one designated by the President.
3. Addresses of welcome and response.

4. The report of the Committee of Arrangements.
5. Reading the minutes of the last general session.
6. The report of the General Secretary of the last annual meeting.
7. Election of the Association's members to the Executive Council.
8. Presidential or other addresses, if decided on by the President and Committee of Arrangements.

Sec. 5.—The order of business for all subsequent general sessions shall be the same as that for the Executive Council.

Sec. 6.—All addresses delivered at any annual meeting shall immediately become the property of the Association, to be published or not, in whole or in part, as deemed advisable, in the official journal of the Association. They must, as soon as they have been delivered be handed to the General Secretary, who shall refer them to the Finance Committee. Any other arrangement for their publication must have the consent of the author or of the reader of same and of the Finance Committee.

## ARTICLE II. SECTIONS AND SECTION WORK.

Sec. 1.—The sections to be held at any annual meeting shall be determined by the Executive Council. In default of their so determining the duty shall be discharged by the Committee of Arrangements, who shall also appoint or elect the chairmen thereof and the vice-chairmen and secretaries. These section officers shall serve for such meeting only, but any of them, if deemed advisable by the Committee of Arrangements, may be appointed for the following meeting in proper course.

Sec. 2.—Duties of the officers of sections. The chairman shall preside at each meeting of any section, or in his absence or at his request, the vice-chairman shall preside. The secretary of each section shall keep a correct account of the transactions, and shall record them in a special section minute book provided by the General Secretary. The chairman and secretary of each section must verify and sign the minutes.

Sec. 3.—Each section shall hold its first annual meeting at 2 p.m. on the first day of each annual meeting; and each subsequent day of the annual meeting at 9 a.m. and 2 p.m. until the programme of that section is completed. No section shall hold a meeting that will in any way conflict with a general meeting of the Association.

Sec. 4.—Honorary members of this Association shall have the privilege of presenting papers before any section and taking part in any of the scientific discussions.

Sec. 5.—All papers, essays, photographs, diagrams, etc., presented in any section shall become the property of the Association, to be published in the official journal of the Association or not as determined by the Finance Committee, and they shall not be otherwise published except with the consent of the author and of the Finance Committee.

Sec. 6.—Each author of a paper read before any section shall as soon as it has been read, hand it with any accompanying diagrams, photographs, etc., to the secretary of the section before which it has been presented, who shall endorse thereon the fact that it has been read in that section, and shall then hand it to the General Secretary to lay before the Finance Committee for publication, in whole or in part, or otherwise disposed of as may be deemed advisable by that Committee.

Sec. 7.—The order of procedure in any section shall be:—

1. Calling the section to order.
2. Remarks by the chairman.
3. Reading minutes of previous meeting.
4. Reading of papers and discussions thereon.
5. Nomination of Honorary members of the Association.

Sec. 8.—No paper shall be "Read by Title," except by unanimous vote of the section before which it was to have been read.

Sec. 9.—No business of any description shall be introduced at any meeting of any section except as hereinbefore provided.

## AMENDMENTS.

### ARTICLE I.

The Executive Council at any annual meeting may instruct the Finance Committee to make or to have made any changes in the articles of incorporation which may appear desirable, or which may be made necessary by any change or amendment in the constitution and by-laws of the Canadian Medical Association.

### ARTICLE II. AMENDMENTS TO BY-LAWS.

No amendment to by-laws shall be made except on a three-fourths vote of the Executive Council; provided that no amendment shall be acted on until the day of meeting following that on which the amendment was introduced.

# CURRENT MEDICAL LITERATURE

## MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

### MASSAGE IN PHLEBITIS.

Marchais says that the usefulness of massage in the treatment of phlebitis is no longer disputed. He sums up the first part of his discussion by stating that the affected member should be immobilized as long as there is fever, and for fifteen days after the temperature has fallen. When the temperature has been absolutely normal for fifteen days massage and movements may be begun. The veins should not be massaged. For the first four days passive movements of the toes and of the foot are made. Very gentle effleurage is applied to the foot, to the leg, and to the external part of the thigh. During this treatment great care should be taken not to move the affected member from the plane of the bed. No pressure should be made over the saphenous or femoral veins. On the fifth day the patient may himself attempt certain movements, and he may exercise the muscles of his leg. On the tenth day the patient may be able to sit up in bed. Compression is useless and harmful. There will be marked edema, but this will gradually disappear. The writer declares that he has never had any accident in using this treatment.—*Révue Française de Médecine et de Chirurgie.*

### THE EFFECT OF NIGHT WORK ON THE BLOOD.

It is quite universally admitted that light and, conversely, its absence exert a well-marked effect on the animal organism, and that this effect is primarily manifested on the blood. Observers are by no means agreed, however, as to the exact nature and importance of this process, and an examination of the literature on the subject gives one the impression that the effect is a matter of conjecture rather than of actual proof. In view of this uncertainty and of the importance of a definite knowledge of the subject, an extensive experimental investigation was instituted by Gardenghi (*Wiener klinisch-therapeutische Wochenschrift*, Nos. 27 and 28, 1906), in which a considerable number of rabbits and guinea pigs were deprived of light for varying periods and careful observations were made with reference to the changes in the body weight of the animals, in the relative number of the red and white blood cells, and in the hemoglobin and iron contents of the blood. In many cases the morpho-



logical changes in the elements were also studied. It was thought advisable to determine the iron in addition to the hemoglobin content, because it has been shown that the relation between these two elements is by no means constant under either normal or pathological conditions.

The results as regards the changes in the body weight are rather interesting; some of the animals gained, others lost in this respect, and the writer accounts for this by assuming that in certain cases the withdrawal of the light resulted in diminished assimilation, in others it produced a slowing of the processes of oxidation. The alterations in the number of red and white cells were so inconstant that no conclusions were possible. A moderate diminution in the amount of the hemoglobin and iron as compared with that in the blood of the control animals was noticeable, however, although the decrease of the iron content was usually less than that of the hemoglobin. The writer is inclined to the belief that this phenomenon is brought about by the decrease in the amount of iron absorbed and in the retarded hemoglobin formation, rather than by a destruction of the previously formed hemoglobin. The reduction varied in both elements from 15 to 22 per cent., a demonstration of the fact that light must have an important bearing on the production of the blood coloring matter in animals as it does on chlorophyll production in plants.

These observations in animals have also been confirmed by the writer in the human subject, and he has found that bakers, among others, show this same constant diminution in the hemoglobin percentage; this can be demonstrated within a short time after night work is taken up, and it soon becomes a chronic complaint. No doubt the same phenomenon could be demonstrated among those engaged in other night occupations, and such workers should be instructed to remain in the open air during the day, when they are not sleeping, in order to counteract the influence of the absence of this sunlight when at work.

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#### LUPULIN IN THE TREATMENT OF GASTRO-INTESTINAL DISEASES.

This subject is treated by Stern in the *Medical Record*, Sept. 22nd. Although officinal, this drug is not much used, the fact that quantities of hop liquors are used as stomachics does not affect this statement, as the amount used in this way would necessarily be very small.

Lupulin is a fine, brownish-yellow dust covering the inner scales of the flowers of the humulus lupulus, or hop, which really consists of minute globular glands containing hop-resin, hop-oil, bitter principles, lupulic acid, etc. But little is present in unripe hops, and the amount

varies with the variety of hop from six to twenty per cent., certain Bavarian varieties being the best. The lupulin readily deteriorates, and it is only the fresh preparation, or that carefully kept in cold storage and in air-tight containers, that is reliable; that found in the ordinary drug stores will, in most cases, be unsatisfactory.

Lupulin contains several substances, including lupulic acid and an alkaloidal substance called lupuline, but it is upon the lupulic acid that the action seems to depend. When this substance is exposed to the air its colorless prisms change to yellow, and valeric acid and aldehydes are formed. Experiments on animals with lupulic acid have shown that in sufficient quantity it is poisonous, by paralysis of the central nervous system and the heart.

Lupulin finds a special indication in the functional disturbances of the stomach, in sensory as well as motor and secretory neuroses, and in neurasthenia gastrica. The gastric neuroses are almost always expressions of general affections like neurasthenia and hysteria. For nervous anorexia:—

℞ Lupulin ..... 0.3 gram (5 grs.)

D. t. dos. No. C (100) in caps. gelat.

Sig. From one to three capsules one or two hours before meals with carbonated water.

If a more energetic local action is desired, the following combination will be found useful:—

℞ Lupulin ..... 0.3 gram (5 grs.)

Berberini phosphatis ..... 0.03 (gr. ss.)

Capsicini ..... 0.0075 (1-8 gr.)

Ft. d. t. dos. No. C in caps. gelat.

Sig. From one to three capsules half an hour before meals.

Hyperæsthesia of the gastric mucosa, in which there exists a heightened sensibility of the gastric nerves attended by painful sensations upon very slight digestive or psychic irritation:—

℞ Lupulini ..... 0.5

Camphoræ mono-brom. .... 0.15—0.3

M. et. ft. pulv. d.t. dos. No. XXX.

Sig. One powder before meals in wafers.

In neurasthenia gastrica, or nervous dyspepsia, we have a combination of the neuroses spoken of in the foregoing, and lupulin may be combined with indicated remedies:—

- ℞ Lupulini ..... 0.15  
 Ferri et quininae citratis ..... 0.1  
 D. t. dos. No. C in caps. gel.  
 Sig. Two capsules before meals.
- ℞ Lupulini ..... 0.15  
 Ferri et strychninae citratis.  
 Cinchonidinæ sulphatis ..... aa 0.05  
 D. t. dos. No. C in caps. gel.  
 Sig. Two capsules three times a day.
- ℞ Lupulini ..... 0.15  
 Massæ ferri carbonatis ..... 0.1  
 Extracti nucis vomicæ ..... 0.015  
 M. d. t. dos. No. C in caps. gel.  
 Sig. Two capsules before meals.

In the functional disorders and neuroses of the intestines, lupulin finds a field of usefulness, being given in a similar manner. It can also be given per rectum when the oral route is unavailable. Of course other methods of treatment indicated should not be neglected.

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#### THE RELATIONS OF METEOROLOGICAL CONDITIONS TO THE PREVALENCE OF ENTERIC FEVER IN NATAL.

In the *Transvaal Medical Journal*, August, Dr. Watkins-Pitchford writes on the relations of meteorological conditions to the prevalence of enteric fever, and, while the data made use of covered only two years and, therefore, no conclusions of value could be arrived at, some of the observations are of interest. He notes that the weekly notifications of enteric vary similarly at Maritzburg and at Durban, which are 70 miles apart, and this suggests some meteorological relation. The daily observations recorded at the city laboratories are those of the temperature in the shade, temperature of the soil at a depth of four feet, height of the sub-soil water, humidity of the atmosphere and rainfall.

An examination of the chart of record shows that the accession of enteric fever has, in each year, coincided with the hottest part of the year, yet an unusually hot season is not followed by an increase in the disease, and in other countries the height of the disease does not coincide with the hottest weather.

Ballard pointed out that when the four-foot earth thermometer reached 56 degrees F. epidemic enteritis appeared in the locality, and the maximum severity coincided with the highest point reached; however, here the earth thermometer never fell below this point during 1904,

so that if such a relation is to be found the temperature line must be higher.

The relation of the height of the ground water and its movements to the prevalence of enteric fever has never been settled. As far as the two seasons here are concerned, the disease began to increase while the ground water was at or near its lowest point, has reached its maximum prevalence during the rising of the water, and has declined with its fall; there seems also to be a connection between an abnormally low sub-soil water and a severe visitation of fever. The chart for the relative humidity of the atmosphere shows that the enteric season coincides with the season of greatest humidity.

The weekly rainfall chart for two years and that for the weekly notifications of the disease in Pietermaritzburg show a decided degree of similarity. The following facts are brought out by these charts:— (1) That the rainy season and the enteric season coincides. (2) That in the last week in the month of August preceding the bad season an inch of rain fell, whereas the month of August preceding the mild season was quite dry. (3) That the bad season was marked by much heavier rainfall than the mild season. (4) That the last week of November in the bad season experienced a rainfall heavier than any in the mild season until the end of January. (5) That a heavy week's rain was usually followed, two or three weeks later, by a rise in the notifications. (6) That the very heavy rains occurring in the latter part of the wet season were followed by a decline rather than an increase in notifications. (7) That in twelve months, May, 1903, to April, 1904, that is, the twelve months of the bad season, 36.22 inches of rain fell, whereas in the same period of the mild season 31.97 inches fell.

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#### THE SCIENCE AND ART OF EATING.

Our Athenian contemporary, Professor Bedelar Maturin, has a hobby which he rides on every possible occasion—the exploitation of the work which Brillat-Savarin wrote a century ago on “The Physiology of Taste.” The latter believed that human beings should cultivate the wholesome enjoyment of life; that the education of the tastes and the appetites should be an index of the degree of civilization. The man of good instincts and refinement should know how to eat and drink, to converse (a lost art to-day), to appreciate a beautiful landscape, to enjoy the fragrant flowers—in all things to deport himself sanely and soberly. Like the much-maligned Epicurus of old, Savarin was an exceedingly temperate man. They both comprehended well, wise philosophers as they were, that true pleasure lay not in gluttony and other

inordinate appetites, but in the knowledge and practice of reasonable conduct in all the manifold aspects of existence. "The love of good living is not merely a physical, but an intellectual and a moral quality, as well, almost deserving to rank as a virtue." We would omit the "almost." Savarin's book (which de Balzac termed "adorable") was written with a double object in view: "to lay down the fundamental theory of gastronomy, so that she would take her place among the sciences in that rank to which she has an incontestable right," and "to define with precision what must be understood by the love of good living, so that for all time that social quality may be kept apart from gluttony and intemperance, with which many have absurdly confounded it." Lest the reader imagine Savarin's work to be lacking in profundity, we quote the following: "The most momentous decisions of personal and of national life are made at the table." "But for life the universe were nothing; and all that has life requires nourishment." "The fate of nations depends on how they are fed." The man of sense and culture alone understands eating." "A good dinner is but little dearer than a bad one." These and other aphorisms in the book are exceedingly practical: "One should eat slowly and in minute portions;" this is in essence, the Fletcherism of to-day. "Digestion, of all the bodily functions, has most influence on the *morale* of the individual." "The great majority of us eat and drink too much;" is not this dictum announced to-day with trumpets, as if its utterance had never before been essential? Savarin was probably the first exponent of the modern science and art of gastronomy, which has been enormously developed since his day. But among the many tomes on food and dietetics now extant, among the mass of literature on practical cookery to be found in the magazines, no writing will be found more scientific or more useful than that which this genial and kindly Frenchman, a century ago, left us for a legacy of good cheer. If it were more read and its precepts followed, there would be less dyspepsia, less crime and fewer divorces.-  
*Jour. A.M.A.*, Oct. 6.

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#### BARON TAKAKI'S OBSERVATIONS ON BERIBERI.

The remarkable freedom of the Mikado's troops from disease during the late Manchurian campaign directed the attention of the entire medical world to the excellence of the Japanese sanitary régime. Inasmuch as beriberi was one of the principal bugbears which the medical officers of the army were obliged to fight vigilantly, some observations recently disclosed by Baron Takaki, of the Japanese army, before the Montreal

Medico-Chirurgical Society are worthy of note. In Japan, where the disease has been known for centuries, it is designated Kak'ke, "leg trouble." It asserts itself more particularly in the larger cities and older towns. It is not only peculiar to Oriental climes—Formosa, Corea, China, Borneo and the Philippine Islands—but is likewise quite prevalent in Brazil and other parts of South America. Beriberi exhibits three forms—acute, subacute and chronic, the latter manifestation being relatively rare. After investigating climatic and living conditions, occupation, clothing, etcetera, with negative result, Baron Takaki discovered that food exerts a marked influence in the prophylaxis and cure of the malady. When the men were provided with nitrogenous and carbohydrate foods, in the proportion of one to thirty-two, occurrences of the disease were rare, but as the nitrogenous food was increased the disease also increased. Out of one hundred and sixty troops provided with mixed food in unsuitable proportions, sixteen succumbed. Later, under the same climatic conditions, and with a sufficient supply of rice and barley, no cases developed, while those already ill experienced a rapid recovery. Under the nitrogenous and carbohydrate foods in the proportions specified, bodily weight increased, the disease was almost absolutely eliminated, and the men were practically oblivious to heat or cold.—*The Physician and Surgeon*, Sept., 1906.

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#### RESEARCHES 'ON MICE CANCER.

In concluding a most interesting and closely reasoned paper, Ehrlich acknowledges the generous support he has had, in carrying out his prolonged and costly experimental researches, from the Government, the Frankfurt magistracy, and a number of high-spirited contributors.

He admits that only a fraction of the problems that suggest themselves have so far been tackled, and that the ultimate cause of tumor growth is still unsettled.

He has not, personally, seen substantial reason for adopting the "parasitic" theory regarding tumor growth, and cancer growth in particular, but he preserves still an open mind on the subject. Like Jensen, he is prepared to regard the cancer cell as a colony-forming parasite.

His chief achievement, he believes, has been the attainment in his experimental work, of a satisfactory—to some extent, indeed, a brilliant—immunising action against even the most malignant conceivable strain of tumor material. He believes this is only the prelude to ultimate more far-reaching success.

"Some commanding bastions of the cancer fortress are already in our hands," he says. "Let us hope that the others will quickly follow; so that, with all the outworks in our possession, we may, with strong hope of success, attack the main problem of the fight for conquest over human cancer, and at last carry it by storm."—*Glasgow Med. Jour.*, October, 1906.

## SURGERY.

Under the charge of H. A. BEATTY, M.B., M.R.C.S., Eng., Surgeon Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital; and Chief Surgeon Ontario Division, Canadian Pacific Railway.

### INGROWING TOE-NAIL.

This condition consists of inflammation of the matrix and skin at the side of the nail, usually on the outer side of the great toe, where it comes into contact with the second toe. It occurs in adult males and females, usually of the working class, who wear badly fitting tight boots, and who have a great deal of walking to do, and who, at the same time, do not keep their feet clean. It is occasionally found, too, that the great toe-nail has been cut too short so that none projects beyond the soft parts. The soft parts of the toe become pressed up against the side of the nail, and ulceration occurs along the lateral fissure. In some cases, there is an offensive discharge from the ulcer, and much swelling takes place in the lateral fold of skin. The chief symptoms are that the patient has pain on walking, and, in bad cases, walking may be impeded. If the disease is not attended to early, lymphangitis may occur. The treatment consists in attending to the hygiene of the foot, which should be kept thoroughly clean, the toe-nails cut square and their edges allowed to project slightly beyond the soft parts. The socks should be changed frequently, and the patient instructed to wear properly fitting boots and shoes. In some cases, in which the nail is thick and well developed, and there is no ulceration in the lateral fissure of the nail, it is sometimes found to be a good plan to introduce a small pad of boric acid lint underneath the nail, so as to take off the pressure of its edge; at the same time the previous points, with regard to the general hygiene of the foot, must be insisted upon. In the worst cases, however, operation is advisable, and Cheyne and Burgard recommend the following simple operation as the best:—"The patient, being under an anæsthetic, a lateral flap is cut at the side of the toe by entering the knife vertically at the base of the nail just outside the ulcerated area. The point of the knife, as it comes against the

ungual phalanx, is carried round it, immediately outside the bone, and in contact with it, and, finally, the point may be protruded on the plantar surface of the toe, at the point opposite to that at which it is inserted. A lateral flap is then made, by carrying the knife straight forward and bringing it out beyond the nail. It is not always necessary to make a wound on the plantar surface. If the cut is carried well downwards in front, the flap can generally be turned aside without making any incision on the under surface of the toe. The nail is now split down by scissors from the free edge to the base, a little to the outer side of the centre, and the portion on the affected side is pulled away by forceps. The matrix, beneath the portion thus removed, is then completely dissected away. Care must be taken to remove it right back to its extreme limit, for it must be remembered that the matrix extends backwards beneath the skin for about a quarter of an inch; if any portion is left behind, it will give rise to fresh growth of nail. When this has been done, there is a flap at the side of the toe, and a raw surface corresponding to what was previously the outer portion of the nail. The flap is then made to cover this raw surface, and is fixed in position by two or three stitches. The result of this operation is that no nail grows on the side operated upon, and, as the edge of the remaining portion of the nail is on a higher level than the skin, the soft parts cannot be pressed up against it; no recurrence can therefore take place, even if tight boots are worn, or even if the affected toe is on the top of the one next to it. The wound usually heals by first intention, and, after a fortnight, no further dressings are necessary, and the patient may be allowed to walk about. The disinfection of the toe before operation must be carried out with the minuteness required for all operations in this situation; micro-organisms are very abundant in the folds about the toes and nails."—*The Practitioner*, London, October, 1906.

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#### MORTALITY AFTER OPERATIONS UPON THE GALL-BLADDER AND BILE PASSAGES.

In a summary of 1,500 operations upon the gall-bladder and bile passages, William J. Mayo, in the *Annals of Surgery*, Volume XLIV, Number II, indicates the trend of surgical practice in these cases and compares the development of surgery in this field with that of appendicitis. He states that there were 845 cholecystostomies with a mortality of 2.13 per cent. There were 319 cholecystectomies with a mortality of 3.13 per cent. There were 207 operations upon the bile passages with twenty-seven deaths, about 13 per cent., arranged in four groups:



Group I, 105 cases with three deaths, 2.9 per cent, consisting of those patients in whom all gall-stones were present in the common duct but without immediately active symptoms. Group II, 61 cases with ten deaths, 16 per cent. In this series there was active infection not only in the common duct but also involving the ducts of the liver. Stones were usually present. Group III, 29 casts and ten deaths; 34 per cent. In these there was complete obstruction of the common duct. In group IV, which concerned malignant disease, there were 12 cases with four deaths, 33 $\frac{1}{3}$  per cent. mortality. The total number of deaths following the 1,500 operations was sixty-six, an average mortality of 4.43 per cent.

The author states that the mortality in the first 1,000 cases was 5 per cent.; in the last 500, 3.2 per cent. The death rate after cholecystostomy in the last 500 cases was 1.47 per cent. In the last 500 cases he also lowered the death rate after cholecystectomy in 1.62 per cent. This view illustrates the merit of experience and selection of cases.

From the standpoint of mortality cholecystostomy is the safest operation for the average case, and yet in the author's hands removal of the gall-bladder has been followed by nearly as good results. He reasons that as the best surgical practice removes the appendix while yet the disease is confined within it, so removal of the disease while still in the gall-bladder will show a mortality of less than one per cent. "With the passage of the stone into the common duct we no longer have a localized disease but one fraught with grave dangers from liver infection and cholemia, and in this condition nearly one in seven of our cases came to operation, while one in twenty-five developed malignant disease of the gall-bladder, or bile tract, and in most of these cases gall-stones were present. In other words, one patient in six had allowed the favorable time to go by, although the very large majority had ample warning in the early and safe stage for operation."—*The Physician and Surgeon*, Sept., 1906.

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## VENEREAL DISEASES AND THE PUBLIC HEALTH.

The homely adage, "An ounce of prevention is worth a pound of cure," is rapidly acquiring new and stronger significance. If it is true that "there is no such thing as science for the million," it does not follow that society in general cannot be greatly benefited by being enlightened on matters regarding hygiene and the prevention of disease.

The work done this year in the Section on Hygiene and Sanitary Science was of great value, and much good is to be expected from the

deliberations of the committee appointed by the Association to outline a plan of organization of a department of public instruction. Already societies of social hygiene have been formed in New York, Philadelphia, Chicago and elsewhere, here and abroad, for the purpose of checking the spread of venereal diseases.

No ailments are more common than these, yet there is none more insidious and pestilential. The number suffering from them cannot be accurately determined. Some one has estimated that five million people in this country are or have been tainted with syphilis; this is probably an overestimate, but the number is enormous. The number of those affected with gonorrhœa is undoubtedly greater than of those suffering from syphilis. Yet the subject has, until recently, received little attention as compared with its far-reaching consequences.

No statistics can measure the destructiveness of these diseases. Death rates indicate but a fraction of their results, but every medical man knows the terrible consequences that too often follow them. The horrible mutilation and disfigurement of neglected syphilis is not less dreadful than the later outcropping of the disease after the interval of hope and forgetfulness, nor less disastrous than its perpetuation in the lives of another generation.

Gonorrhœa, often considered proper subject for jest and ridicule, fills our institutions of the blind with its victims and brings to the operating table of the gynecologist the largest proportion of his patients, the innocent sufferers from the "indiscretion" and ignorance of youth. The effect of this festering mass of disease on the future welfare of our race is more than a subject for speculation. Its destructiveness has been observed in the past, and there is reason to believe that it is even now threatening that enormous vitality which has given supremacy to the Anglo-Saxon people.

Perhaps one reason why this subject has not received the attention it deserves is its very extensiveness. It touches every rank and grade of society; it goes into the home and drags out the family skeleton. It involves more than a scientific or even an economic question; it brings in, wholesale, the problem of social morality and the controllability of sexual passion. It is excused on the ground of natural impulse or the violence of human affection. It is part of a condition to be recognized but not discussed; it is "taboo" in good society; only to be jested about over the wine or hinted at with bated breath, over the teacups. Venereal diseases are most insidious. They are born of the night and go through life hidden. The consumptive carries his brand on his forehead, and though still bound by ties of love and affection to those dear

to him, he must be shunned like a leper and segregated as dangerous to the welfare of society. The sufferer from "private disease" is usually, to outward appearance, sound of body, though he may be physically and morally rotten. His appearance, therefore, does not create apprehension and society accepts him without question.

The nature and results of venereal afflictions should be made common knowledge. Ignorance is the nursery of vice and suffering, and there is no class of diseases whose awful consequences the public comprehends less than these.

The remedy lies in education in the broadest meaning of the word.—  
*Jour A.M.A.*, Aug., 18.

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## GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist Toronto Western Hospital, and  
Consulting Surgeon Toronto Orthopedic Hospital.

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### THE PRINCIPLES AND MECHANICS OF ABDOMINAL DRAINAGE.

In the October *Surgery, Gynecology and Obstetrics*, Dr. R. C. Coffey of Portland, Oregon, has a paper on this subject. He presents the following deductions:—

1. Fluids are rapidly absorbed by the peritoneal cavity; crude or granular matter only through lymph spaces at the diaphragm.
2. A drainage tract always contains micro-organisms.
3. Any form of drainage is isolated from the free peritoneal cavity in six hours.
4. A drain causes a flow of serum by irritation, which is profuse in proportion to the amount of drain within the peritoneal cavity.
5. This flow is delivered to the surface only in proportion to the amount of drainage passing out through the wound.
6. Serum and pus accumulate around drainage only when the drainage at the outlet is less than that contained inside, or is not sufficiently extensive to deliver the fluid before it is filled with *débris* and granulations.
7. Blood and pus are never found in the neighborhood of a properly applied drain after forty-eight hours.
8. The flow of serum dissolves blood-clots and thick pus, leaving the gauze clean and white by the time it ceases.

9. The flow of serum does not occur to any extent in formed abscess cavities; therefore, blood and pus are not well drained from them by capillary drainage.

10. A tube will drain a walled cavity and will drain the peritoneal cavity under the influence of gravity, but not otherwise.

11. A single tube is much more likely to be choked by intestines and omentum than two or more parallel tubes.

12. Gauze drains in proportion to the amount coming through the opening, and will only drain when it is in contact with dressings or clothing, or when its outside end is at a lower level than the cavity to be drained.

13. Small gauze drains are likely to be choked at the exit, unless covered by a tube or protective.

14. There are three cavities of the peritoneum to be drained, the right and left flanks separated from each other by the spinal column, and the pelvis separated from the flanks by the psoas muscles. Either flank holds more fluid, and is an inch deeper than the pelvis, and its bottom is more than four inches below the top of the divide made by the psoas muscle on which the appendix rests. The body must be elevated to an angle of fifty-one degrees to bring the bottom of the flank on a level with the divide, and sixty or seventy degrees to properly drain by the Fowler position. The entire cavity can be drained by gravity by a lateral position.

15. Drainage should always be in contact with the parietal peritoneum on one side. A line drawn in the center of the perineum to the tip of the shoulder passes through the pelvis and deepest part of the flank, and on the right side through the appendix. These diagonal lines we call the right and left drainage lines. Drainage should always be placed external to these lines, or just above the pubic bone.

16. If only one of the three cavities is infected, it alone should be drained.

*Conclusions.* Drainage must be extensive enough to do its work in less than six hours, and should reach the bottom of every infected cavity, either by gravity or drains. It should not be removed until it is loosened, which varies from six to fourteen days. Given the principles and mechanics of drainage, and a competent surgeon is able to fit his method to the case. Peritoneal drainage, intelligently used, is one of the most effective life-saving agents at our disposal.

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## OBSTETRICS AND DISEASES OF CHILDREN.

Under the Charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty,  
McGill University, Montreal.

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THE TREND OF PEDIATRIC OPINION CONCERNING THE  
FEEDING OF INFANTS.

Cow's milk, according to T. S. Southworth, *Jour. A. M. A.*, Nov. 6, 1906, is the only milk at present obtainable commercially in sufficient quantities to meet the needs of infants deprived of their normal food from the maternal breast. All methods of preparing milk for the infant which are of real value, including some of proprietary origin, have the common purpose of enabling the infant to digest successfully the casein of cow's milk in a sufficient quantity to thrive.

The general utility of starch materials as diluents does not depend so much on whether the starch itself can be digested, as on the mechanical subdivision of the casein curd, and the absorption of the vegetable proteids which such cereals contain. Starch may be changed by dextrinization into a mixture of soluble gums, sugars, and vegetable proteids. Starchy digestion and starchy non-digestion are two very different things. The former indigestion being caused by starchy foods, is deleterious when it occurs, but the non-digestion and non-absorption of starchy granules is often more or less present even in adults wherever starch forms a part of the food.

The value of barley water as a diluent is probably to its viscosity, which is partly due to its peculiar proteids.

The action of lime water is to prevent coagulative action of the rennet ferment from being exerted on the milk, and the author points out the necessity of carefully increasing the proportion of lime water in the infant's food mixture proportionately to the increase of milk. From 5 to 10 per cent. of lime water being the proportion required.

The action of other alkalies is then discussed. They also unite with the casein to alter its digestive properties. It is especially in vomiting cases where the stomach is too acid from the production of abnormal acid, that bicarbonate of soda finds one of its best fields. Citrate of sodium acts differently to the alkalies in that it produces a sodium casein which rennet cannot affect. His experience with the employment of from one to two grains of the citrate of sodium to each ounce of actual milk in the food, as recommended by Boynton, has been on the whole satisfactory.

Professor Cannon's work on the action of the intestinal peristaltic waves is then referred to. His observations, in the opinion of the author, throw new light on the mechanism of intestinal digestion and the method

by which the chyme is churned and mixed with the digestive secretions in the intestine. The occurrence of small quantities of perfectly digested fecal matter in the motions of young infants securing only small amounts of milk from the breasts, and in whom there is a considerable quantity of mucoid secretions, may be explained in the light of Professor Cannon's work. These flakes are formed by segmentation in the smaller intestine, but the fecal residue being small, and the intestinal secretion relatively large, they are eventually surrounded by the latter, so that subsequent fusion into larger masses is prevented. Flatulent distension of the bowel and the preventing of the normal segmentation of the chyme may thus interfere with intestinal digestion.

With regard to percentage feeding, the author states that in scope and elasticity it had far surpassed the previous efforts at artificial feeding, because it enables us to control intelligently and with an approximate accuracy the constituent elements in the food for each individual infant. It can never replace the physiologically adapted milk of the human breast among the great mass of our population. Artificial feeding is unquestionably attended with more danger than breast feeding. The two alternatives should never be offered lightly to the prospective mother, as though they were of equal value. The author's experience is that, if the physician not only takes the time to write out his directions, but to explain them fully, the mothers can be taught to carefully prepare milk food mixtures. The less milk and cream are manipulated the better they are digested by infants, and consequently that the use of top milks of easily varied richness in fat is preferable to cream and milk mixtures. Care should be taken that the food content of the milk is not over four per cent. Failure in infant feeding arises from the non-apprehension and non-application of certain broad principles. The difference between the fairly normal infant and the sick child are not sufficiently noticed. The usual schedules for feeding at different ages may apply to the fairly normal child whose digestive powers have been developed, more especially when such feeding was begun at birth; but to endeavor to make an infant with a disturbed, or untrained, digestion, take the amount of casein in the food usually scheduled for its age, is folly. The stools, the weight chart, and the behaviour of the child are the triad with which successful feeding must be conducted.

The author thinks that after six months the proteid should be gradually increased to above two per cent. in order to get the best results.

The most carefully planned percentages in food mixtures are often fruitless in producing satisfactory results because of over-feeding or improper intervals. The tendency is to overfeed undersized infants. These are fed at intervals and in quantities to correspond to their weight

or apparent age, and owing to their failure to gain the quantity is repeatedly increased to exceed that of a normal infant, with disastrous results. In feeding poorly nourished infants longer intervals and smaller quantities should be the rule. The food may be made more concentrated as the stomach regains its tone and excellent results may be produced if these precautions are regarded.

In the discussion which followed the reading of these papers before the American Medical Association, Dr. Wentworth, of Boston, stated that men who have done most for infant feeding in Germany are unanimous in the opinion that babies need very little beyond one per cent. of proteids in their infancy, and that they get a sufficient quantity in that amount to nourish them perfectly.

Dr. Effa Davis, of Chicago, mentions a series of five cases in which the children were all doing well on ordinary milk, but when they were put on the sodium citrate modification, all remained stationary in weight for six weeks, and then began to lose. When they were put on their former food mixtures they all gradually improved. Therefore sodium citrate does not suit all cases.

Dr. Vanderslice, of Chicago, was a strong advocate of the sodium citrate method. In giving this mixture, he does not begin with small percentages of milk, but the child is put on equal parts of milk and water and one part of sodium citrate to the ounce of milk. If with this amount the curds persist, he adds more citrate of sodium to the milk. He has never given higher than two grains to the ounce, and in no case had it ever been necessary to persist in the use of one grain to the ounce of milk for more than ten days. As rapidly as possible the percentage of milk is increased, whether the child be one day or one year of age. A new-born baby necessarily fed artificially from birth is capable at the end of two weeks of taking whole milk and digesting it. This method is particularly useful in dispensary work.

Dr. Cotton agreed that sodium citrate should be used temporarily, as early as a good digestion and a high percentage milk is accomplished.

Dr. Southworth agreed that if enough casein cannot be given in the ordinary form for the child to thrive on, something may be added to the milk which will change the form of casein so as to be more readily absorbed in larger amounts. All these additions to milk should be used in selected cases and with a knowledge of what they are used for. Because a large amount of proteids can be borne with the addition of sodium citrate, is no reason that the use of percentage feeding should be abandoned, or that ridiculously large amounts should be given to young infants. The action of sodium citrate is to decalcify the casein so that it cannot subsequently form tough paracasein curds. With acids it forms a soft, flocculent curd.

## OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., L.R.C.S., Professor of Ophthalmology and Otology Medical Faculty of the University of Toronto.

## THE TREND OF PEDIATRIC OPINION CONCERNING THE WAY SERVICE.

Nelson Miles Black, Milwaukee, Wis. (*American Journal of Ophthalmology*, Feb., 1906), discusses this important subject in a practical manner, as the result of personal experience in riding on engines in all kinds of weather, day and night. He states that the objections to engine men wearing glasses are:—

1. Glasses becoming dirty and smeared. Answer—Objects at long distance are hardly interfered with, and the dirt not being evenly distributed over the surface of the glasses, vision is permitted through innumerable small clear areas. 2. Becoming covered with fog, mist, rain or snow. Answer—Practically the same answer can be made to this question, and the use of the "losire" pencil has been found sufficient to prevent fogging. 3. Becoming fogged on coming from cold into warmth. Answer—Experience has shown that less than five seconds is needed to clear the glasses. 4. The danger of the glasses becoming broken. Answer—This danger is practically nil. 5. The legal aspect in case of accident. Answer—That vision is better without correcting glasses after dusk or darkness is asserted by well-known authorities. Oculist testimony would neutralize such a claim.

As distinct advantages in wearing glasses, the writer mentions: 1. The relief afforded by corrections of refractive errors of men long in service. 2. Protection against wind, rain, sleet and snow. 3. Relieving the reflection when running beside rivers and lakes from snow in winter and sand in western districts. 4. Overcoming the disturbances of vision when running towards the rising or setting sun. 5. Doing away with the heat and glare from the fire-box.

The opinions of ophthalmologists throughout the United States was obtained by circular letter as to the safeness of railway employees using glasses, with the following results: 463 affirmatives and 22 negatives. 1. That the protection afforded to engineers and firemen by glasses is a distinct advantage. 2. That the disadvantages of glasses in railway service are not sufficient to render an employee unsafe who wears them for protection or to correct a latent refractive error made manifest by age. 3. That the wearing of glasses for protection of the eyes in railway service will tend to prevent the reduction in vision usually found in engine men at 40 to 50 years of age. 4. That the only method of eliminating glasses for distance in railway service in the future is to have all applicants for employment examined for latent refractive errors when



they apply for the position, by men scientifically trained for such work.

5. That the consensus of opinion among the ophthalmologists of the United States is that an engine man or fireman wearing glasses on duty is as safe an employee as one without them, if not safer.

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#### INDICATIONS AND CONTRA-INDICATIONS FOR OPERATIONS IN MASTOID DISEASE.

E. E. Clark, in the *Medical Standard* for May, 1905, in pointing out some of the indications for operation in mastoid disease, very properly brings forth a line of argument that is often neglected. In discussing the chronic variety of the disease he says: "The general profession must hear much before they, as a body, realize its great importance." A patient suffering from a chronic otitis media suppurativa is entitled to the same warning advice from his physician as to the menacing dangers of amyloid degeneration of the liver, kidneys, spleen, lymphatic glands and intestinal mucous membrane, as he receives when suffering from a chronic bony necrosis and suppuration in the limbs. For it is the long continued absorption of small amounts of pus that causes these parenchymatous changes in the glandular organs of the body.—*Laryngoscope*.

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#### DIVISION OF FEES.

In discussing the equities of "Shall the Specialist Pay a Commission To or Divide a Fee With the General Practitioner?" Lanphear (*American Journal of Clinical Medicine*) concludes his article by asking, "What is right?" and answers as follows:

"After a most careful study of the subject (from the standpoint of one who has been a country doctor as well as a city specialist), I have reached these conclusions: (1) In ordinary consultation no division of the fee should be thought of; (2) in cases simply 'referred' to the specialist for treatment no division of the fee is usually proper; (3) when specialist and doctor jointly attend the patient, division of the fee is honorable and just—no attempt being made to conceal the transaction from the patient; (4) when the specialist operates in the home of the patient, in the city or country, and the physician assists and assumes the responsibility of the after treatment, it is the duty of the operator to ascertain whether or not the regular attendant has been, or will be, paid sufficiently well for services rendered—if not, then divide the fee in proportion to value of services rendered. In other words, it is never right for the 'great specialist' to get all the money and the regular attendant to get nothing; both deserve more than they ever get—but the 'home doctor' is the one who usually suffers most."

## LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., C.M., Toronto, Fellow of the British Society of Laryngology, Otology and Rhinology.

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• PERSISTENT UNILATERAL HEADACHE DUE TO NÆVOID  
CHANGES IN THE ANTERIOR EXTREMITY OF  
THE MIDDLE TURBINATE BONE.

Wyatt Wingrave (*Jour. Laryngology*, Aug. 06) gives the notes and pathological findings of a very instructive case. Dr. Smurthwaite (Newcastle, Eng.), at the recent meeting of the British Medical Association in Toronto, described a series of cases of headache caused by enlargement of the middle turbinate pressing on the septum. Wingrave's patient sought relief for severe and persistent frontal pain of three months' duration. The right nostril was normal, but in the left the breathing was distinctly less in volume, due in part to a slight septal deviation, but chiefly to a marked hypertrophy of the left middle turbinate, which completely blocked the meatus. There was no sign of bone lesion or pus. Under cocaine the turbinate became pale, but only slightly reduced in size. Transillumination was negative. The anterior end of the middle turbinate was removed by snare with complete relief to the pain. On microscopical examination the mucous membrane appeared normal, but the bony cancelli were found to contain very thin vessels distended with blood and pressing on the walls. The walls of the distended vessels were thin, consisting only of epithelioid cells, in striking contrast with the arteries, which in some of the adjacent cancelli were quite normal. The condition, which is strongly suggestive of a nævoid state, differs entirely from cavernous distension of the erectile tissue, so common in the posterior end of the inferior turbinate, a state which involves the mucous membrane only, and not the bone. The morbid condition may be regarded as a passing nævoid state of the spongy bone, possessing no resemblance whatever to any inflammatory process, such as rarefying osteitis, necrosing ethmoiditis, suppurative sinusitis, etc. The operation is done by snare alone and care must be taken to avoid (1) Simply stripping off the soft parts, and (2) Never to exert any dragging or tearing force, since, in patients over forty, the ethmoid bone is so spongy as to be biscuit-like in consistence, and, consequently, extremely brittle. Wingrave also utters a word of warning in removal of polypi from the middle meatal region in old people. Forcibly crushing and tearing may easily lead to a rupture extending quite to the cribriform plate.

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## EDITORIAL.

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### FOOTBALL FATALITIES AND INJURIES.

In a former issue we discussed some of the phases of this game, as it is now being played. We propose again to report a few of the casualties which have occurred since.

On Saturday, 3rd November, a game was played, the report of which contained the following item:—"The inter-year football match between the year '09 and the freshmen at Trinity College was marred by two accidents to two of the players. Ernest H. Cox of Winnipeg, an '09 man, had his right wrist badly broken. J. D. Beasley suffered very painful injuries, a ligament of his neck being broken, and the muscles badly wrenched and torn. He may be laid up for some weeks."

On the same day a game was played between the Tigers of Hamilton and the Argonauts of Toronto. The papers of Monday contained the following in the account of the game:—

"About the middle of the third quarter, Crooks, one of the Argos' inside wings, in falling on the ball had his forehead cut open, and much against his wish was compelled to retire. The gash inflicted was eight inches in length, and one inch in depth. It required twelve stitches to close the cut.

"The accident to Hay occurred in the following manner:—Barron, the Tigers' snap, made a kick at the pigskin but missed, and instead connected with Hay's leg. Hay collapsed, writhing in agony. The snapping of the bone could be heard on both sides of the field. Hay was removed to Grace Hospital. It was found on examination that he had sustained a bad fracture."

The papers for November 6th contained the following:—

"Fred McKechnie, an Arts student at the University of Toronto, had his right leg broken in two places in a game of Association football on 'Varsity campus about 4 o'clock yesterday afternoon. The young man was hurt during a scrimmage, and was carried into the gymnasium, where the fractures were reduced. The police ambulance conveyed him to his sister's home at 155 Collier street. The injured player is a member of the 'Varsity team."

The following item appeared in the press despatches of 8th November:—

“Ottawa, Nov. 7.—Johnstone, of the St. Patrick’s Football Club, is in a precarious condition as the result of a fractured skull, which is believed to have been received in the game with Montreal last Saturday. The injury has its interest for medical science in that the results did not become manifest until Monday night, when he was discovered in a comatose condition, which led to the suspicion that he had been attacked by roughs. The police scout this, and all the evidence goes to support the football theory. He may die.”

In the game between 'Varsity (Toronto) and McGill, played in Montreal, the following accident occurred:—

“Cox, the quarter, sustained an injury to his jaw in stopping a run, and left the game. Johnston, who played the first two matches with McGill, replaced him.”

The Peterborough team visited Toronto and played with the Argonauts. A portion of the description of the game makes choice reading:—

“Fistic encounters and rough-house work were the features of the afternoon. The visitors introduced four tactics, and the local team failed to appreciate them. Aritistic knee work, *scragging a la Hurtubise*, and kicks around the head didn’t appeal to the Argos a bit. They showed their resentment by returning the compliments—in approved Jeffries style—and a couple of open mix-ups in the third quarter brought down the house. Gilbert, it is alleged, deliberately kicked “Babe” Hewitt behind the ear, and Flett sailed into Gilbert. After a minute of hammer and tongs doings Gilbert had enough. The referee put Gilbert off for the rest of the game, and ‘Pete’ was given five minutes. McDonald handed the kneec to Flett while the latter was taking a punt, and Clarke straightway started a boxing tournament on his own account. Both men were sent off for the remainder of the quarter, the bout resulting in an even break. This mix-up occurred shortly before the Flett-Gilbert argument took place. In the same quarter Meagher broke his toe, and Crooks retired with him; and Ford wrenched his knee, necessitating Sinclair accompanying him to the side lines. Gillespie had wrenched his knee just before half-time, and retired. Mara, whose bad ankle was bothering him, went with him, so that at one stage of the third period but thirteen men all told figured in the play.”

In the game between the Tigers of Hamilton and the Montreal team, played on Saturday, 17th November, Tope, of the Tigers, had his leg broken. There was a lot of scragging on the lines that escaped the officials, and many a knee and elbow were handed out to the unfortun-

ates who had the ball. Kelly and Burkholder were ruled off for five minutes for fighting. Craig was hurt when tackled by McKeand. Du-Moulin received a punch on the face, knocking him down and out.

Port Hope, Nov. 17.—Tammany Tigers of Toronto defeated the Kingston Limestones to-day in the semi-final for the junior O.R.F.U. championship, by 13 to 1, in a rough game. The Limestones roughed it all through the game, but the Tigers outclassed them on the field and won handily. In the second half one of the Kingston players had to retire, owing to a broken rib.

In the game on 17th November between 'Varsity and Queen's we read: "The game was cleanly fought with few casualties. Pearson was laid out, however, early in the second half with a wrenched knee, and his loss was felt."

In the game between Ottawa College and McGill on 17th November, we read that "Kennedy of McGill had both bones of his leg broken."

From the States we take the following items:—

"Ann Arbor, Mich., Nov. 10.—Captain 'Joe' Curtis, of the University of Michigan Football team, had his leg broken to-day during a game between the 'Varsity team and a team composed of ineligibles and scrubs. Curtis, who had not played in the first half because of a weak ankle, was running with the ball when he was tackled. The tackle was low, and as Curtis fell his leg was heard to snap."

"Great Falls, Mont., Nov. 10.—In a football game at Fort Shaw this afternoon between the Great Falls team and the Fort Shaw Indian team, James Curtis, full-back for the Great Falls team, was killed in a scrimmage, internal injuries bringing about death. Curtis was 25 years old, and a native of Syracuse, N.Y., where his parents live.

"Lafayette, Ind., Nov. 17.—Lyle Nicol, 16 years of age, son of Hugh Nicol, athletic director of Purdue University, died to-day of an injury received in a football game last Wednesday. Young Nicol was kicked in the abdomen."

But there is no need to further multiply these examples. Football, as played to-day, is on a par with the duel, the bull-fight, and professional pugilism. Much of the success of the game lies in maiming members of the opposing team. On the value of violent sports, hear what *American Medicine* for October has to say:—

"Athletic overstrain and acute dilation results from the excitement of college contests and there must be as many cases with permanently damaged irritable hearts as among soldiers in war. Mature adults, as a rule, are not so capable of exerting themselves to such a point. Only the youth has the nervous energy and therein is the danger. The cases

of 'exhaustion' among the defeated 'varsity' crew are really blots upon the medical profession—the professional trainer does not know of the after-results and is less to blame. His occupation should be eliminated from all colleges, and the boys left to the more natural methods they instinctively pursue. It is time to teach boys that mere muscularity and hard manual labor are not conducive to longevity, while moderate exercise is. The desire to develop the body as a means of developing the brain, has carried us too far. It is a matter which parents expect the faculties to remedy."

We repeat again that the risks to life and body are too great in football for any enjoyable, proper sport. Those who have seen much of football throughout the United States have almost unanimously come to the conclusion that the game calls forth the lower and not the higher qualities of the players. Yet ladies of fashion will crowd to see the game that has caused many deaths and serious injuries, and has called forth such exhibitions of violence as the foregoing accounts of the games reveal.

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#### THE STATE AND VENEREAL DISEASES.

When we bear in mind the serious sequels of syphilis and gonorrhœa on the health of the people, it would appear that the time has arrived when some organized and definite effort should be put forth to control the spread of these diseases.

The numbers of premature births, or deaths shortly after birth, due to syphilis, cannot be told definitely, but they would surprise us all if exactly known. Then there are all the cases of ataxias, pareses, aneurisms, arterial sclerosis, skin diseases, bone diseases, etc., caused by this disease.

Gonorrhœa has been regarded much more lightly than has syphilis, and yet, we doubt if it is not equally as serious a disease. Vast numbers of women are sterile because of the work of the gonococcus. In the United States 15,000 persons are totally blind because of an attack of gonorrhœal ophthalmia. Joints and hearts, not a few, have been permanently impaired through the activities of the same infection. And then there are all the distorted urethræ to consider.

What should be done? This question has been answered from several standpoints. One set say that there should be licensed places, under medical inspection. Another set say "No" to this on the ground of morals. A third set urge that a campaign of education should be inaugurated.

In some of the States of the American Union efforts are being put forth to place suitable literature in the hands of the people, recommending a chaste life, and advising that, if disease be contracted, medical advice be at once sought. In this printed literature the subject of prevention is fully discussed.

In France good work has already been done. Printed matter is freely distributed. At the head of the movement are such names as Fournier and Bricux. Many examining stations have been established where persons may ascertain whether they have any form of venereal disease or not.

Some writers strongly urge that instruction should be given in the public schools, institutes, and colleges on the physiology and hygiene of the sexual organs. These writers also urge that means should be taken to inform the people on the serious and protracted character of the infections of syphilis and gonorrhœa. There should also be some provision made in every hospital for the treatment of venereal cases.

There can be no two opinions on the duty of the State with regard to these diseases. It is the duty of the people as a whole to educate the people in sanitary science, and to take steps to prevent disease. The State should bear the cost of the circulation of proper literature, and the giving of instructions in the form of lectures. When the health of the people is at stake, sentiment must not seal the mouth, nor stay the spread of printed matter. The people should know the ways by which these diseases may be spread, their serious natures and necessity for thorough treatment.

In Germany a society exists for the propagation of information. In its literature the moral aspects of the subject are not discussed, but an appeal is made to the readers along the line of the dangers of these diseases. With regard to this method, *American Medicine* remarks thus:—

“The society may be correct in this choice of methods, for the bulk of the young people addressed are not of a type which is much impressed by sermonizing. They must be ruled by fear of consequences, and it is a good plan to let them be fully informed as to the hardness of the way of the transgressor. It is substituting natural law for moral law and inculcating the idea that morality is the highest expression of natural law. That is, he who does right, need never fear the consequences; the wrongdoer is the one who must be on the defensive. Nevertheless the circulars do give the impression that they are designed to teach young people how to escape the wages of sin, and not how to avoid the sin itself. In this respect they are very objectionable, and should be greatly modified to suit American ideals.”

We take strong ground that both aspects of the question should be ever kept before the youth of the country.

Dr. Denslow Lewis, of Chicago, chairman of the Section on Hygiene and Sanitary Science of the American Medical Association, concludes an article on "The Advocacy of Publicity Regarding Venereal Prophylaxis" thus :—

"But we can teach the essential facts regarding the dominating influence of the sexual instinct, the possibility of continence, the dignity of virility, the duty of the man to protect the innocent, the danger of venereal infection, the disreputable methods of the quack and other important matters only too frequently misunderstood or ignored. We can inquire into economic conditions. We can study the subject in all its relationships as we study any other subject, and we now need no longer be ashamed to do so. Above all things, we can diffuse the knowledge we already possess. We can tell the truth as far as we know it. We can warn against dangers that exist. We can speak out fearlessly, and by so doing we can save many a victim of ignorance from a most deplorable fate."

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### MEDICAL INSPECTION OF SCHOOL CHILDREN.

On several occasions we have directed attention to the urgent need for medical inspection of the public schools of the country, especially those in the cities. We are glad to note that other leading medical journals are taking the same position.

A short time ago, a number of doctors were appointed in Montreal to inspect the schools there. The results so far more than justify the action of that city. Many rooms were found to be used for teaching purposes that were entirely unsuited. In some rooms three times as many children were crowded as there was accommodation for. A large number of children were attending school with serious errors of refraction or other eye troubles. Other diseases were found, and a number with active tuberculosis were found in attendance.

We are quite sure that an inspection of the schools in other cities would reveal the fact that many children are attending school at serious risk to their own and other children's health. This should not be.

Drs. C. J. Hastings and Helen MacMurchy, of Toronto, have ably advocated this movement, and we hope that the time is not far off when they shall see their labors crowned with success. It is practically admitted that it should be done. Why, then, not do it?



## THE CANADIAN MEDICAL ASSOCIATION.

In another portion of this issue, we publish the full text of the proposed constitution of the Canadian Medical Association. To it we invite very careful consideration, as there are some proposed changes that will bear close study, and deserve serious consideration.

Under the duties of the Finance Committee, and also under the Scientific Work of the Association, article 2, section 5, it is clearly set out that everything contributed to the proceedings of the Association belong to it, and cannot be published anywhere, except by the consent of the Finance Committee and the author. This, of course, presupposes that the Association will publish its own journal, and in this way the papers, etc., would be secured for its pages. But, in the event of the Association not being able to go on with a journal for some years, then it would be very unwise to adopt any such rule of government. Any arrangement like the foregoing would be much worse than that to which Dr. McCallum, of London, took objection, namely, that publication in the journals now published in Canada was of little or no value.

The trend of the new constitution is all in the direction of publishing an official journal for the Association. But this, again, must be weighed very carefully. At the present the journals are published under conditions that favor their being got out at comparatively low cost. Much of the time spent upon them is a labor of love. It could not be so in the proposed journal.

There must needs be an office, an editor, a bookkeeper, a stenographer, and an organizer and canvasser for subscriptions and advertisements. Now, let us try to put some of this into dollars. An office would cost \$500 a year, for it must have a vault and contain several rooms. The stenographer would call for an outlay of \$500, for she or he must be competent, and know something of medical terminology. The editor must give his whole time to the work, or the members of the Association would say the journal was no good. On general principles, an enterprise of this kind would call for his whole time. It is hardly likely that a suitable person could be secured for less than \$3,000. The bookkeeper would receive about \$1,000, for he would have to give his whole time to the work of the office. The official organizer would cost about \$3,000, in salary and travelling expenses. An issue of 2,000 would cost at least \$3,000 for paper and press work.

This comes to \$10,000 to run a journal of about 96 pages, issued monthly, and with a distribution of 2,000 copies. But this would all have to be worked up to and would require many years. In the meantime much money would be required, which might not be on hand.

But some may say that much money would be made out of the advertisements. It is quite true that some funds could be procured in this way. But these have first to be secured. To do this, a competent person must call upon the advertisers and secure their contracts. He must be able to show a good circulation list to get these advertisements, or to secure them at a paying price. At the commencement, however, there would be only a nominal circulation list to show.

The *British Medical Journal* has about 20,000 members. About 15,000 of these are in the British Isles. This is out of a medical population of some 45,000 and after 74 years of effort. In the United States there are at least 100,000 doctors to draw from; and, even there, the *Journal of the American Medical Association* had a strenuous fight for its existence for many years.

In Canada there are some 6,000 physicians, and 2,000 of these may be set aside at once because of age or language differences. This leaves only 4,000 to draw a circulation from. Suppose that the management may be able to do as well as in Britain, and induce one-third to become members of the Association, the circulation of the journal would not exceed 1,500 for many years to come. 'On this number, the publication cannot be paid for on a membership fee of \$5, after the running expenses of the Association have first been deducted.

Dr. Third, in the *Queen's Medical Quarterly* for October, has an article on the "Reorganization of the Canadian Medical Association." He says that "the very existence of the Association is dependent on the publication of an up-to-date journal." Such a journal would be a good thing if we can secure it; but we would ask Dr. Third in what way the financial difficulties are to be met. From Dr. Third's statement, "as McCallum, of London, pointed out at the recent meeting, to publish an article in a Canadian journal seemed about tantamount to consigning it to the flames or locking it up in a drawer," we most respectfully dissent. We are receiving weekly a very large number of medical journals by exchange, and state that any articles of merit in the Canadian journals are noticed and receive due consideration.

The *Montreal Medical Journal*, for November, sees some serious objections to the clauses placing the full control of all papers, etc., in the hands of the Finance Committee, before a journal has been established. Our contemporary remarks with regard to the publication of such a journal, "but we are obliged to confess that the proposal does not look very attractive." Then, again, it states, "if all interests could be brought together, and merged into one Canadian journal, we would have an organ worthy of the country and of the profession. To such an effort we promise all the support which we can give."

With the above we concur, but to bring about such a "merger" is, we think, quite utopian. We do not see the slightest hope of inducing the journals now in existence to close up publication and step aside. The *Maritime Medical News* is doing fine work down by the sea, and no doubt there is a strong local sentiment to keep it well to the front. The profession of the Eastern provinces have their own special questions to thresh out. The *Montreal Medical Journal*, that has done splendid work for the profession, might not be too willing to give up its monthly visits, and to become "one of the has beens." The *Queen's Medical Quarterly* might even wish to visit its old friends, the alumni of Queen's, *die fausto*. An active effort is on foot to establish a medical journal by the profession of the Western provinces. Coming to Toronto, it is very doubtful if a "merger" could be successfully worked. Much time and money have already been expended in bringing the Toronto journals to their present position, and they might not see their way clear to wipe all this out. To buy up the vested rights of all the journals would require a large sum of ready money.

It may be just as well to admit the fact that the journals now published will remain in the field. The papers read at the Canadian Medical Association would only fill a few issues of its journal, and it would be necessary to secure material to make up the remaining issues of the year. This is no sinecure task.

We have endeavored to point some of the difficulties in the way of the Canadian Medical Association embarking on the troublesome and expensive experiment of publishing a high-class medical journal. If any one can show in what way we have erred, we shall be very glad, indeed, to give his views every attention. It may be well for the profession to remember the words of Horace, *festina lente*.

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### THE STATE OF THE MEDICAL PROFESSION.

That there is much discontent among the ranks of the medical profession, no one will gainsay. But it is not so easy to explain the causes for the discontent.

Some of the trouble arises from overcrowding. All over the civilized world there are too many doctors. In Ontario there are about 3,500 doctors to 2,000,000 people, or 1 to 700. In the cities, the overcrowding is worse. Remedies for this have been suggested in the direction of rendering the college term longer, and the entrance standard higher.

Doctors are doing themselves much harm by taking club practice. The total amount lost in money is very large, but the loss in prestige is a far more serious matter. There is no justification for any doctor tak-

ing a club on any other terms than to be paid for what he does. To take a club for a dollar a head is rank folly, and degrades the profession. Let this be given up by all, and it will redound to the benefit of all.

It has been suggested that the sale of proprietary medicines injures practice. This may be true at the time, but in the end these people must come to the doctor. This does not justify the abominable frauds perpetrated in the name of patent medicines, and the Government should take steps to remedy this gigantic evil and drive it from the land. It can be done and should be done.

Druggists are in the habit of prescribing over the counter. It is, we think, a very common custom for druggists to treat coughs, venereal disease, and, indeed, many ailments. This is, no doubt, a serious infringement on the domain of the practising physician, and is the cause for much loss to him. Druggists cannot be cured of this habit, and the remedy is for the physician to dispense most of his own remedies. In these days of neat preparations, it would not take up much of a doctor's time to give his patient fifty Blaud's pills, or one hundred mercurial tablets, as the case might require. Repeats would be in his own hands. In a case of syphilis the doctor may receive \$2 and the druggist perhaps \$20 by repeating the prescription. Doctors can remedy this trouble very easily.

The quack is abroad. All sorts of "curers" are treating the people for their ills. Here, we think, there is a real loss to the profession. These quacks have come into existence, and remain with us to some extent, because doctors have been somewhat careless in small matters. They have allowed these people too much right of way in massage, electricity, exercise treatment, etc. The profession must give heed to the signs of the times or suffer loss.

But the most important phase of the subject is that doctors, when they meet in conventions, pay too much attention to the discussion of disease, and in what way they can give away their time by aiding some moral reform, and not enough consideration to the business side of their calling. Now, we are not decrying these worthy efforts, but the poor doctor must live if he is going to be even a moral force in the community. You may say what you will, but so long as the doctor's body is not a delusion of mortal mind, he requires shelter, food, and raiment. The profession in every municipality should form a business association to regulate the abuses that threaten from so many quarters.

Who will take the lead in this matter? Why not Toronto set the ball a-rolling? If any place started, others would soon follow. Mr. J— has a good wage and his wife is attended in her first confinement by Dr. A—, who is not paid. For her second confinement she engages Dr.

B—, and for her third Dr. C—. None of these are paid. This sort of bird of passage could easily be put out of business if the doctors would only come together and understand each other a little better than they do at present.

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### THE GROWTH OF TRUTH.

On the 18th of October, 1906, at the Royal College of Physicians, London, Professor William Osler delivered one of the most masterly and brilliant orations that ever fell from the lips of man. His subject was William Harvey, and the story of the circulation; but what a vast array of facts he gathered into his discourse! The oration was alike unique from both the historical and philosophical standpoints.

With skillful choice of words, he states that "History is simply the biography of the mind of man." To understand our position to-day, we must go back to the beginnings of all great discoveries and movements, and view them in the light of their surroundings.

In the first, said the lecturer, truth, like a living organism, grows. One person makes possible the achievements of another. In the second place, scientific truth is conditioned by the state of knowledge at the time. For example, Jenner discovered vaccination, but he could not have written upon immunity. A long step had to be taken ere this could give an Ehrlich. In this place truth is bound to prevail. It may meet with much opposition, but will in time command the respect of mankind. There is a world of truth in the saying of Thomas Carlyle that "a great man is like fire out of heaven; the rest of men waited for his coming, and then they, too, would flame."

In speaking of truth, Prof. Osler quotes Plato to the effect that there are the stages of acquisition, latent possession, conscious possession. In the case of syphilis, there were centuries of acquisition, then the latent knowledge of some organism; and just recently, through the lamented Schaudinn, we have the conscious possession of the cause in the *spirochæta pallida*. With regard to cancer, we have passed through the stages of acquisition and latent possession. Any day may bring forth the conscious possession of the true cause.

John Locke, who was also a doctor, said that "truth scarce ever yet carried it by vote anywhere at its first appearance." Harvey was fiercely attacked in some quarters. Semmelweiss was driven insane with ridicule and bitter criticism. Oliver Wendell Holmes was opposed keenly to the authorities of his day. Morton was called a quack, and allowed to die in neglect and want. Simpson was regarded as a fanatic. McDowell ran great risk of losing his life. Lister had to fight his way inch

by inch, and only won when all opposition was driven from the last ditch. Great truths have usually a long period of acquisition, a shorter period of latent possession, and through the brilliancy of some gifted person it is ushered into conscious possession. This was the case with Harvey and the circulation of the blood.

Far away back among the ancients there was a faint glimmering of knowledge regarding the circulation. Through the long centuries there was a process of acquisition of light upon the subject. Then there came to be a latent knowledge that the blood moved and there was some knowledge of the lesser circulation. But it was reserved for Harvey to throw all this into the crucible of his fertile intellect and bring the truth regarding the circulation into conscious possession of the mind.

In a manner that is truly fascinating, Prof. Osler touches upon the work of some of the old masters in medicine, such as Galen, Fabricius, Fallopius, Vesalius, Caius, etc., etc. For these great men there are no commemorative days. Only a few days can be fixed for great discoveries in medicine, and one of these *dies mirabiles* is the 17th of April, 1616, when Harvey gave his lecture on the circulation of the blood before a distinguished gathering. This gathering is described by Prof. Osler with the skill of an eye witness.

A delightful account is given of the reception of the new doctrine both at home and abroad. But one of the greatest of the results of Harvey's discovery was that it introduced the experimental method. He taught nothing which he had not seen. It is more than a mere compliment of words to say that modern medicine dates from Harvey's studies and his methods. All discoveries lead to others, and his methods are with us to-day in our investigations on toxins, opsonins, etc. He was practical, and he handed down his lamp to posterity, *passim spargere lucem*. Harvey's work shed great lustre on British medicine. In conclusion, Prof. Osler urges upon all the words of Harvey, "to study the secrets of nature by way of experiment; and, lastly, for the honor of the profession, to continue in love and affection among ourselves."

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### THE FUTURE OF THE MEDICAL PROFESSION.

In the past the medical practitioner had to do mainly with disease as it actually presented itself in the individual. This made his work a very personal matter, and to a very considerable extent this will ever be the case.

But, as the result of much study, labor, research, and pioneer effort, the causes of many diseases have been discovered, and the course these

causes pursue, their methods of attacking the individual, and the manner of their prevention are becoming established facts.

All this is bringing about a vast change over the future of the profession. President Eliot of Harvard University, in an address a short time ago, said :—

“The medicine of the future has, therefore, to deal much more extensively than in the past with preventive medicine, or, in other words, with the causes of disease as it attacks society, the community, or the state, rather than the individual. The object in view will be not only to arrest or modify a malady which has appeared in the body of a patient, but, as in the recent case of yellow fever, to learn how the disease is communicated and how to prevent that communication. The study of mitigations, remedies and cures is to continue; but the study of the causes of disease and the means of prevention is to be greatly developed. The function of the nineteenth century physician will continue, and, indeed, will become more effective through a better knowledge of the forces which may be made to act upon his patient, both from within and from without; but another sort of physician will be at work in the twentieth century, preventing the access of epidemics, limiting them when they arrive, defending society against bad food and drink, and reducing to lowest terms the manifold evils which result from the congestion of population.”

But there is a new phase in the treatment of disease that is coming more and more towards the front. The discoveries of the newer methods of treating infectious diseases may lead to the establishment of stations under the control of experts in the production of certain vaccines and the best methods of employing these. Already this is seen in the management of yellow fever, the plague, and rabies.

Year by year a larger number of patients are treated in hospitals. This always tends to the exclusion of the general practitioner as compared with those who hold positions in these hospitals. Practically no operative surgery is attempted in private houses. All such cases as require active surgical treatment had better betake themselves to a well-managed hospital. All over Canada and the United States, indeed, all over the world, there are very many excellent institutions which are largely under the control of a limited number of physicians or surgeons. This operates against the man who is on the outside.

Preventive medicine, state and municipal control over many diseases, the influence of the numerous hospitals, are all actively making for a decided change in the future of the medical profession. The time may not be so very far away, after all, when the conditions, spoken of a few

years ago by Willoughby Wade in his presidential address at the British Medical Association, may arrive, that the duties of the general practitioner will mainly consist of presiding at the birth of the child, the injuries occurring in his locality, and waiting upon those who die at their own homes mainly of old age.

Such tendencies will lessen the total amount distributed in fees, and inevitably lessen the numbers who will find medicine sufficiently lucrative to attract them towards it. Already preventive medicine has seriously reduced the incomes of doctors in many countries. The next step is a reduction in the disciples of *Æsculapius*.

The medical profession of the future will have the satisfaction not only of ameliorating the condition or prolonging the life of the suffering individual, but also of exterminating or closely limiting the preventable diseases.

Already enormous strides have been made towards the state control of disease, and we are only on the threshold of what is to be.

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#### THE AIMS AND REQUIREMENTS OF MEDICAL EDUCATION.

Few topics of greater importance could engage the attention of the medical profession than the aims and requirements of medical education. Professor Noël Puton discusses this subject very ably in the *Scottish Medical and Surgical Journal* for November.

As the prevention of war is nobler than the successful prosecution of war, so in the future the great work of the medical profession will be along the lines of prevention rather than the curing of disease. But to be successful in the prevention of disease, we must know the cause. Many cases of anæmia that resist all forms of treatment by iron and arsenic are due to an intestinal parasite. Attention to this both prevents and cures. Take cholera as another example. In 1884 Koch discovered the germ, and noted that it is spread by means of water. Boiling the water, then, arrests the progress of the disease.

In the case of diphtheria, a sure step was taken onwards in 1884, when Klebs and Löffler discovered the organism; and another equally important step, when, in 1893, Roux and Yersin found that by injecting some doses of the poison into a horse, the serum of the horse's blood contained something that cured the disease. In like manner we know the causes of tuberculosis and how to prevent it.

These are the ways in which knowledge has aided us in coping with disease. Much real progress has been made. In the case of cancer we have not made the final discoveries necessary to enable us to prevent and cure the disease, as we can in some others.



Now, it has often been charged that the medical profession is not making enough progress. But in reply to this there is a ready answer. Most of what has been done in the past has been the result of work that was not too liberally aided by the public. It is the latter that must always benefit by every means for the prevention and cure of disease, and so the public should aid liberally in research work. The secrets of nature are generally found out after a long and hard struggle; and this requires money.

But the public must give its support in another way. It countenances the infliction of much pain under the name of sport, it mutilates countless numbers of animals that they may be more useful as beasts of burden or as food. It cannot, therefore, refuse the right to carry on all needed experiments in the search of the cause and cure of disease.

In addition to the foregoing, the public must furnish the requisite laboratories. All investigation must not have a purely utilitarian end in view. Much of Pasteur's work was carried on for the love of knowledge, and, this gained, it led to his practical discoveries.

To accomplish much progress, there must be men capable of carrying on experiments, and this is one of the principal duties of the universities, namely, to train investigators. This very training that makes men good investigators, also makes them successful in the diagnosis and treatment of disease, by equipping them mentally with a knowledge of the fundamental principles of physiology and pathology.

In every medical curriculum, three things should stand out prominently. First, there must be a thorough training in the preliminary sciences; second, there must be the application of these sciences to the healthy body; and, third, there must be knowledge of the changes produced by disease, and the influence of remedial agents. All teaching in medical sciences should be with the view of enabling the student to recognize the changes wrought by disease. Unless this be the outcome of the teaching of physiology, it does not count for much. Histology must make the student familiar with the normal tissues, in order that he may recognize the pathological conditions. "Image the whole, then execute the parts, fancy the fabric, ere you build."

Observation, the reasoning faculty, independence of judgment, perseverance and determination must be cultivated. The student must not only get knowledge; he must get understanding. It is necessary for the student to keep his sympathies wide, and to become something more than mere doctors. Remember the words of Dr. John Brown in his "Rab and His Friends": "That general strength and soundness of understanding, and that knack of being able to apply your knowledge instantly and aright, which must ever constitute the cardinal virtue of a

great physician, the very pith and marrow of his worth." It is the possession of these wider interests and wider sympathies which often makes the doctor the greatest helper of mankind. "Be cultured men as well as able doctors."

## PERSONAL AND NEWS ITEMS.

The towns of Virden and Selkirk, Manitoba, are to have hospitals. Edmonton is erecting a hospital for contagious diseases. This is a wise course for the town to take.

A document has been signed by nearly all the doctors of Kingston, agreeing to refrain from lodge and contract practice.

Dr. Franklin Dawson, of Toronto, has removed to 633½ Spadina avenue.

Dr. Brefney O'Reilly has returned to Toronto and commenced practice at 52 College street.

Dr. W. A. Mearns, of Hanover, was married September 26th, to Miss M. R. Whyte, of Nottawa.

Dr. W. F. Mayburry, of Ottawa, was married September 25th, to Miss Florence Graham, daughter of Dr. C. E. Graham, of Hull, Que.

Steps are now well under way to secure a home for convalescents in Winnipeg.

Dr. Charles Ritchie, of Winnipeg, has gone abroad for a year's post-graduate study.

The many friends of Dr. Gaviller will be pleased to learn that he has been appointed medical health officer for Grand Valley.

Dr. J. M. Gordon has decided to locate in Ripley and resume practice there.

Dr. Cassidy, of Drayton, has disposed of his practice there and is locating in Toronto Junction.

After three years abroad, Dr. S. H. Westman has returned to Toronto and resumed practice.

Dr. W. Meldrum, an old Ayr boy, has formed a partnership in New Durham.

Dr. Watt, of the William Head Quarantine Station, B.C., has been inspecting the Lazaretto at Tracadie, N.B.

Dr. Robinson, of Montreal, has recently been appointed Medical Superintendent of the Vancouver General Hospital.

Dr. Rollins has removed from Prince Albert to Raymond, in Alberta.

Dr. J. MacWilliam has disposed of his practice at Thamesford to Dr. Babb, and is going to reside in London.

Dr. Dean, of Richmond Hill, has disposed of his practice to Dr. Boyd, and is locating at Kew Beach, Toronto.

Dr. G. L. McKinnon, who graduated from the University of Toronto a little over a year ago, has decided to locate in Hillsburg.

Dr. J. A. Graham, Campbellton, N.B., sailed on the steamer Kensington, November 17th, to spend six months in the London hospitals.

Brantford people are putting forth an effort to secure a sanatorium for consumptives.

The Protestant Hospital, of Ottawa, was very successful in its recent entertainment to raise money.

Mr. C. A. E. Harriss has made a donation of \$700 to the Lady Minto Cottage Hospital Fund.

At a recent meeting of the hospital board, of Niagara Falls, Miss Hayhurst, of Hamilton, was appointed lady superintendent.

Dr. J. S. Chisholm, late of Wingham, has located in Prince Albert, Sask.

Dr. Levi Secord, of Brantford, had his rig struck by a train, and sustained a cut on the head and some other injuries.

Dr. Thompson, Galt, removed a piece of glass from a man's arm recently. The glass had been in the arm for 35 years.

Dr. A. Campbell, superintendent of the Winnipeg General Hospital, has recovered from an attack of appendicitis.

Dr. F. J. Shepherd, of Montreal, was decorated with the honorary degree of LL.D. by Harvard University.

St. Michael's Hospital, Toronto, is going to enlarge the institution. It will soon contain 300 beds.

The sanatorium for consumptives at Weston is to have an addition to its accommodation which will cost \$27,000.

Dr. John L. Todd, a graduate of McGill, who is well known for his researches on sleeping sickness in the Congo States, has had the Order of Leopold conferred upon him by the King of Belgium.

Dr. Herbert P. H. Galloway, who removed from Toronto to Winnipeg last year, has been appointed lecturer in orthopedic surgery in the Manitoba Medical College.

There is a movement on foot to establish a sanatorium for consumptives at Manitoba Lake, and a large tract of land has been purchased for this purpose.

The Medical Council of British Columbia, in session at Victoria, unanimously refused an application from Dr. Robert Telford to be restored to membership in the association.

Judging by reports that come to hand, the hospital in Fredericton, N.B., is in a very prosperous condition and doing excellent service to the community.

The many friends of Dr. Thomas Wylie, of Toronto, will be glad to learn that he is recovering from the severe operation which he underwent recently.

Saskatchewan is moving in the right direction when it is taking steps to control the spread of typhoid fever. Dr. Seymour, principal health officer, has been visiting many places in the Province.

Messrs. J. B. and J. J. Grafton, of Hamilton, have generously offered \$5,000 for an infirmary ward in connection with the sanitarium of the city.

After a good deal of discussion, the City Council of London decided that the medical health officer must not make a charge when he attends small-pox cases.

Dr. M. Raynor, of Rose Hall, Ont., was in Toronto a short time ago on his way to Bella Bella, B.C., where he will take charge of the Methodist Mission Hospital while Dr. R. W. Large comes to Toronto on furlough.

At a recent meeting of the trustees of the Toronto General Hospital, Dr. Noble's motion to admit the press to their meetings was voted down. It was also admitted that the hospital was going behind at the rate of \$30 a day.

An effort is being made to raise \$100,000 for a sanatorium for consumptives in British Columbia. Towards the fund the Lieutenant-Governor has contributed \$10,000, the Government \$5,000, and the C.P.R. \$5,000.

At a mass meeting of the medical students of the Winnipeg Medical College, it was decided that they would attend the theatre as a body and have as their guests the nurses of the Winnipeg General and St. Boniface Hospitals.

The Royal Victoria Hospital, Barrie, is in need of funds, as there is reported to be a debt on the institution of some \$4,850. The trustees made an appeal through the press and by circular letter for funds in aid of the hospital.

The Provincial Board of Health of New Brunswick has been called upon to deal with a very serious outbreak of small-pox in Kent County. At present the great majority of the cases are confined to two or three sections of Kent, but the infection has been spreading.

The Welland General Hospital has been freed of its liabilities by Hon. R. Harcourt, J. H. Burgar, B. J. McCormick, and T. D. Cowper. It is to be run in future as a general hospital. The ladies of the town have undertaken to furnish the building.

Toronto friends of Dr. Lionel Pritchard, of Bay Roberts, Newfoundland, will be pleased to hear of his engagement to Miss Whiteway,

daughter of the Right Hon. Sir William Whiteway, of St. John's, which has just been announced. The marriage will take place next June.

The Hamilton City Hospital is doing well. The medical superintendent, Dr. Langrill, reports 47 nurses, of whom 14 graduated. The average number of patients daily was 1,261, and the average daily cost \$1.24. There had been during the year 2,133 indoor, and 1,760 outdoor patients.

Dr. C. B. Coughlin, of Peterborough, was tendered a banquet on the evening of the 8th November, prior to his leaving for his new duties as Superintendent of the Deaf and Dumb Institute, Belleville. There were many friends present to wish him success in his new sphere of labors, and to say good-bye to the genial doctor.

At the meeting of the Board of Governors of the Kingston General Hospital in September, it was almost unanimously decided that the system of government by a lady superintendent, in vogue for the past three years, must be ended if the best interests of the hospital were to be preserved. It was also decided to appoint a medical superintendent at the October meeting. At this later meeting Dr. A. D. McIntyre, of Petrolia, was elected.

Dr. Sheard, of Toronto, reports that 275 samples of milk examined last month show an improvement in the general quality. Still the quality is far from what it should be. The figures were: Under 2 per cent. butter fat, 7; over 2 per cent. and under 2.50 per cent., 27; over 2.50 per cent. and under 3 per cent., 90; over 3 per cent., and under 3.50 per cent., 77; over 3.50 per cent. and under 4 per cent., 51; over 4 per cent., 23.

At the annual meeting of the supporters of the hospital in Galt, Ont., it was stated that there were 38 beds in the institution. There had been admitted during the year 404 patients. The collective days' stay of all patients were 7,077. The expenses for the year had been \$8,427, making a cost per day of \$1.19. An effort will be made to improve the nurses' cottage. The doctors of Galt sought some representation on the board of management, but this was voted down.

The McKellar Hospital, Fort William, is in a prosperous condition. During the year 804 patients were treated at the hospital. The trustees stated there was much need for more accommodation. Some of the doctors who were present at the annual meeting complained that some practitioners had been discriminated against. The trustees were not aware that any such thing had occurred, as it was the desire to treat all alike.

The Medical Council of British Columbia examined twenty-four candidates, of whom nine failed to pass. The names of the successful can-

didates are: Drs. Maclean (McGill), Mackenzie (Toronto), J. W. Mackintosh (Toronto), T. B. Green (McGill), D. P. Hannington (McGill), M. W. Kemp (Toronto), S. Stersky (McGill), W. A. McConkey (Manitoba), J. L. Robinson (McGill), J. H. McDermot (McGill), J. C. Mercer (McGill), E. H. McEwen (McGill), Lachlan McMillan (Illinois), N. M. Macneill (Illinois), A. G. Levy (London, Eng.).

The Calendar of the Medical Faculty of McGill University for the session of 1906-07 contains an insert printed in red which is significant. The notice reads: "It is proposed by the University to establish a five years' course for the degree of Doctor of Medicine and Master of Surgery, beginning in the autumn of 1907. Further notice with full details will appear in the Calendar of 1907-08." At the last meeting of the College of Physicians and Surgeons, held on the 26th of September, a resolution was adopted that the by-laws of the College be altered so that a five years' course could be exacted from all candidates for provincial registration. If the Legislature confirms this resolution, the five years' course will become a legal necessity as well as a University regulation.

The annual meeting of the Board of Governors of the Cross Memorial Hospital, Lindsay, Ont., was held in the library of the Collegiate Institute on Thursday evening, 1st November. The reports presented were of the most gratifying character. The deficit on current account was practically wiped out during the year, and an increased number of patients were treated. The entire management, especially the work of the lady superintendent and the nurses, came in for deservedly warm words of commendation by a number of those present. There are good prospects of a Nurses' Home being erected in the near future, and altogether the lookout is of the most satisfactory character. In order to accomplish the best results greater liberality on the part of the public, or rather a liberality extending to a larger number of people is required.

A deputation representing Queen's University, Kingston, interviewed Premier Whitney and other members of the Government on 7th November, in respect to matters of common interest to the University and Province. Last year it will be remembered the Legislature voted a grant of \$50,000 to Queen's, to be used in the department of medical education. There has been some talk of a closer connection between the Government and the University in the academical and technical side of education, particularly in respect to the school of mining, and it was in regard to this, it is understood, that the deputation called, though all parties to the conference were reticent. The Government, in any event, will probably ask the Legislature at its next session for another grant for Queen's. On the deputation were: Sir Sanford Fleming, Chancellor of the University; Principal Gordon and Mr. G. Y. Chown, the secretary-treasurer of Queen's.

At the meeting of the Medical Board of the Royal Victoria Hospital, it was announced that the Governors had appointed Dr. W. F. Hamilton and Dr. C. F. Martin, at present connected with the staff, to carry on conjointly the work of the Department of Internal Medicine, as they had done during the illness of the late Dr. Stewart.

The following resolution of condolence was passed and is to be sent to the relations of the late Dr. James Stewart, who was so prominent on the medical staff of the Royal Victoria Hospital, Montreal: "The Medical Board of the Royal Victoria Hospital desires to record its deep regr. in the great loss it has sustained in the death of Dr. James Stewart, physician-in-chief to the hospital. Dr. Stewart has been identified with the medical management of the institution since its foundation, and as head of the Department of Internal Medicine has been intimately associated with its development and progress. As a direct result of the great interest which he ever maintained in the welfare of the hospital, often at great personal sacrifice of time and energy, the department attained an enviable reputation in the community and throughout the country, due, not alone to the labor he devoted thereto, but equally to his remarkable personality. Although he applied his interests more especially to nervous diseases, yet his wide knowledge of general medicine, and his great wisdom and judgment, made his opinion valuable to every member of the hospital staff, and to his colleagues in the profession elsewhere as well. Not alone as an honorable and skillful physician with high ideals, but also as a sympathetic friend and a loyal colleague he won his way to the heart of every member of the staff, and it is with the deepest sense of its great loss that the Medical Board thus records its appreciation of his great worth."



## OBITUARY.

W. A. BALL, M.D.

Dr. William A. Ball, 245 Bathurst street, died suddenly 2nd November, at his home, from heart failure. He had been in poor health for several months. The deceased, who was 38 years of age, single, and resided with his parents, was a graduate of Trinity, and the University of Toronto. He had a large circle of friends.

JOHN M. LEFEBVRE, M.D.

Dr. John Matthew Lefebvre died in Vancouver on the 16th September, after a short illness, at the age of 53. He was a graduate of McGill University, and chief surgeon of the Western Division of the Canadian Pacific Railway.

## EDMUND MOORE, M.D.

Dr. Edmund Moore was born in 1843 in Economy, Colchester County, N.S. He graduated from Dalhousie Medical College. He had practised his profession in Salisbury for thirty years. He leaves an excellent reputation behind him as a citizen, friend, physician, and temperance worker. He leaves a widow and five children.

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 BOOK REVIEWS.
 

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## MINOR MALADIES AND THEIR TREATMENT.

By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital; Assistant Physician to the Metropolitan Hospital; late Assistant Physician to the German Hospital; and Hon. Medical Officer of the Sidmouth Cottage Hospital. London: Baillière, Tindall and Cox; Toronto. J. A. Carveth & Co. Price, \$1.50.

The author sets out to give some good advice on colds, coughs, sore throats, indigestion, constipation, diarrhœa, vomiting, giddiness, rheumatism, gout, neuralgia, headache, change of air, general health, insanity, and the use of drugs. The book is not a treatise on practice, but a collection of useful pointers and suggestions. The comments of the author are sound and afford many tips. The book contains many formulæ, models of their kind. We like the book because it is so intensely practical. To the young practitioner it would prove a very valuable addition to his library.

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 SYPHILOLOGY AND VENEREAL DISEASE.

By C. F. Marshall, M.D., M.Sc., F.R.C.S., Late Assistant Surgeon to the Hospital for Diseases of the Skin; formerly House Surgeon to the London Lock Hospital; Surgical Registrar to the Hospital for Sick Children. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth & Co. Price. \$3.00.

This work deals in a comprehensive way with syphilis, gonorrhœa, and the simple soft sore. The author accepts the spirochæta pallida as the organism causing syphilis. He sums up the proof of this in a very convincing way. Syphilis is practically laid down as the cause of tabes and paresis. These two diseases are regarded as one and the same in type—a dystrophy of the neurones. On reading this work it would appear that general infection in gonorrhœa is more frequent than is generally taught. The advice on treatment throughout is excellent. It is one of the best manuals on these diseases we have seen in a long time, and up to date in every respect.



### THE USES OF X-RAYS IN GENERAL PRACTICE.

By R. Higham Cooper, L.S.A., Medical Officer in Charge of the Radiographic Department at University College Hospital; Physician to the Electrical Department at Tottenham Hospital; Radiographer to the Evelina Hospital for Sick Children. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth & Co. Price, 75 cents.

This little book takes a study of x-rays in diagnosis and treatment. It is well illustrated. The physics of the x-ray, the tube, the coil, setting up the machine, photography, the use in diagnosis, etc., are discussed in the first part of the book. In the second the author points out the value of the ray treatment, of the skin, tuberculosis, carcinoma, and sarcoma, etc. Readers will find this book interesting and useful. Its advice is reliable.

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### HIGH FREQUENCY CURRENTS.

By H. Evelyn Crook, M.D., B.S., F.R.C.S., Assistant in the Ophthalmic Department, West London Hospital; Member of the Röntgen Society, etc. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth & Co. Price, \$2.25.

This is a very handsomely got up book, and well illustrated. The first part takes up the Production and Physical Properties of High Frequency Currents. The second part discusses the Physiological Effects of High Frequency Currents. The third part deals with the Therapeutic Uses of High Frequency Currents. The method of using these currents and the diseases and conditions for which they are applicable are gone into very fully. For all workers in this field this will be a valuable help.

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### RETRO-PERITONEAL HERNIA.

Being the "Arris and Gale" Lectures on the Anatomy and Surgery of the Peritoneal Fossæ, delivered at the Royal College of Surgeons of England in 1897. By B. G. A. Moynihan, M.S., F.R.C.S. Second edition, revised and in part rewritten by the Author and J. F. Dobson, M.G., F.R.C.S. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth & Co. \$2.25 net.

It is now nearly ten years since these lectures were first published. We remember having read them at that time with much pleasure. In their revised form they make a most important addition to the anatomy and surgery of the abdominal cavity. The relationship of the duodenal, peritoneal and sigmoid folds and fossæ to disease is well discussed. The diagnosis and treatment are from the pens of two experienced surgeons and trustworthy in every way.

## ENLARGEMENT OF THE PROSTATE.

Clinical Lectures on Enlargement of the Prostate, with a Description of the Author's Operation of Total Enucleation of the Organ. By P. J. Freyer, M.A., M.D., M.Ch., Surgeon to King Edward VII's Hospital for Officers, and to St. Peter's Hospital, late Examiner in Surgery at the Durham University, Lieut-Colonel, Indian Medical Service, retired. Third Edition. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth & Co. \$1.75.

These lectures were originally delivered before Medical Graduates' College and Polyclinic, in 1900. Since then they have undergone thorough revision. The author advocates the suprapubic operation. He is careful to leave intact the outer capsule of the gland so as to prevent the urine filtering into the pelvis. In the operation he finds the finger sufficient. The book is a most interesting one and very useful.

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STUDIES IN THE PSYCHOLOGY OF SEX—EROTIC SYMBOLISM,  
THE MECHANISM OF DETUMESCENCE, THE  
PSYCHIC STATE OF PREGNANCY.

By Havelock Ellis. 6½ x 8½ inches. Pages x-295. Extra cloth, \$2.00 net. Sold only by subscription to Physicians, Lawyers, and Scientists. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

Mr. Havelock Ellis needs no introduction as a writer on the various phases of the sex relationship. This volume discusses Erotic Symbolism, the Mechanism of Detumescence and the Psychic State in Pregnancy. On all the topics the author puts forward some very interesting views. Mr. Ellis is not afraid to express his opinions. On the subject of the Psychology of Sex Mr. Ellis has done much earnest work. It must be admitted that the sex instinct has played a *magna pars* in the affairs of the world. Mr. Ellis's books are well worth careful study.

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OUTLINES OF HUMAN EMBRYOLOGY.

A Medical Student's Handbook of Embryology. By George Reese Satterlee, M.A., M.D., Instructor in Histology and Embryology in the University and Bellevue Hospital Medical College, New York. 12mo, vi+173 pages, 99 figures. Cloth, \$1.25 net. Order through your bookseller, or copies will be forwarded postpaid by the publishers on the receipt of the retail price. New York: John Wiley & Sons; London: Chapman & Hall, Limited. 1906.

We have read this little book with care and can speak in high terms of its merits. This book is designed specially for the medical student and covers the subject of human embryology. We congratulate the author on his success in making a very abstruse subject clear, and the publishers on the handsome form in which they have produced the book. It is well illustrated.

THE  $\text{CHCl}_3$  PROBLEM.

By Richard Gill, B.Sc., M.B., B.S. Lond., F.R.C.S. Eng., Chief Chloroformist to St. Bartholomew's Hospital. 2 volumes. London and Edinburgh: William Blackwood and Sons, 1906. Price, 10s.

Volume I. deals with Analysis, and Volume II. with the Physiological Action of  $\text{CHCl}_3$ . The author has had an unusually large experience in the administration of anæsthetics, and what he has to say will be looked to with expectation. The author discusses the subject under the headings of the parts in which chloroform acts, the chloroform factor, results, physiological action, and experimental investigation. Under each of these headings most useful information may be found. One would hardly regard the chloroform question to be of such large magnitude until these books are perused. Very interesting views are advanced on the action of chloroform on the blood, and how the oxygen acts on the chloroform. The effect of the drug on the circulation, respiration, the pupil, the nervous system, etc., receive full attention. The author reviews the causes of death, vomiting, and other phenomena during and after its administration. We can commend the study of these volumes to all who wish to gain a thorough knowledge of the subject of chloroform.

## THE COMBINED TREATMENT IN DISEASES OF THE EYE.

By G. Herbert Burnham, M.D., Tor., F.R.C.S. Edin., M.R.C.S. Eng., Professor of Ophthalmology and Otology at the University of Toronto; Original member of the Ophthalmological Society of the United Kingdom; Oculist and Aurist to the Mercer Eye and Ear Infirmary and General Hospital, etc., Toronto, Canada. London: H. K. Lewis, 136 Gower St., W.C.

For many years Dr. G. Herbert Burnham, of Toronto, has been well and favorably known as the originator of the Combined Treatment of several severe forms of eye disease. That this form of treatment has saved many an eye, the profession will at once admit. The treatment consists in the internal administration of mercury and potassium iodide, and the hypodermic employment of pilocarpine. This treatment has yielded excellent results in such diverse conditions as rheumatic affections of the eye, syphilitic conditions, gonorrhœal irido-cystitis, conical cornea, kerato-iritis, irido-cyclitis, scleroderma and iritis, paralysis of third nerve, sclero-keratitis, hypopyon irido-cyclitis, specific cyclo-iritis, hyalitis, sympathetic ophthalmia, etc., etc. It would be quite impossible to set forth in a review the method of using the combined treatment in all cases, as it varies according to the case. The theory of the action of this treatment is that it stimulates the nerve centres, the ordinary physiological processes, but especially those of the affected organs. In

this way disease is thrown off. The instructions are given with such clearness that no one need make a mistake. We recommend this book of Dr. Burnham's most heartily. It is the outcome of faithful, original work for years, on an important subject. The results are good and the story is well told. No doctor will ever regret getting this book.

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#### A MANUAL OF OTOLOGY.

By Gorham Bacon, M.D., with an introductory chapter by Dr. C. J. Blake.  
Lea Brothers & Co., New York and Philadelphia, 1906.

The fourth edition of Dr. Bacon's excellent Manual of Otolology has been issued by Lea Brothers & Co., with many new illustrations, and the addition of some forty pages of new matter. While the manual is modestly described as a manual for students, it is in reality a work which might be profitably consulted by practitioners and specialists. Some of the new matter includes a description of osteomyelitis, primary jugular bulb thrombosis, and suppurative inflammation of the labyrinth. The paragraphs on leucocytosis, lumbar puncture, and the treatment of facial paralysis have been rewritten. An appendix has been added, detailing the methods of preparing smears from pus, making cultivations and physiological inoculation. The manual is well printed and got up in Lea Brothers' best style, and can be heartily recommended to the practitioner and student.

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#### CANCER OF THE BREAST.

Cancer of the Breast and its Operative Treatment. By W. Sampson Handley, Hunterian Professor of Surgery and Pathology in the Royal College of Surgeons of England; Assistant Surgeon to the Middlesex Hospital; Late Surgeon to Out-patients, Samaritan Free Hospital for Women. London: John Murray, Albemarle street, 1906. Price, 12/6.

This work impresses one at once as the outcome of much research and wide experience. It discusses the embolic theory, the routes of spread, such as by the lymphatics and the viscera. The process of repair, the anatomy of the axillary glands, the results of operative methods, the principles of operation, etc. The work is splendidly illustrated with figures and plates. The author states that he is not going to devise any new operation, but to decide which of the existing methods is to be preferred. With regard to the spread of cancer, the author advocates the permeation theory.

The author is very full and explicit in his remarks on the subject of the spread of the disease to adjoining organs and parts.

On the operative treatment of cancer of the breast the writer lays down sound rules. He avoids all extreme positions, and carefully chooses the best from the methods of surgeons of widest experience. The key note of his teachings is to be found in the word "thorough."

The publisher deserves much praise for the style in which he has issued the book. Paper, binding, typography, and illustrations vie with each other for first place; and it would be difficult indeed to see in what manner the book could have been made more attractive to the reader.

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## MISCELLANEOUS.

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### A GOOD REMEDY IN MANY CONDITIONS.

Thos. G. Ranney, M.D., L.R.C.P., Resident Physician, British Medical Institute, Atlanta, Ga., in a recent article states, that the combination of drugs, antikamnia and codeine in the form of "antikamnia and codeine tablets," which has been so largely used for the control of cough, is also being successfully employed, to a large extent, in the treatment of nearly all affections of the respiratory tract, which are accompanied by dyspnoea and spasm, namely: bronchitis, laryngitis, phthisis, whooping cough, hay fever and grippal affections. In cases in which the patients were suffering from the severe attendant pain of these diseases, it was found that this combination acted most satisfactorily. Each tablet contains  $4\frac{1}{2}$  grains of antikamnia and  $\frac{1}{4}$ -grain sulph. codeine. To administer these tablets in the above conditions, place one tablet in the mouth, allowing it to dissolve slowly, swallowing the saliva. In the various neuralgias, and in all neuroses due to irregularities of menstruation; this tablet affords immediate relief, and the relief is not merely temporary and palliative, but in very many cases curative. The dose most satisfactory is one tablet every half hour until four are administered.

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### ROBINSON'S PATENT BARLEY.

This well-known food occupies a deservedly high place. It is an excellent food for children, especially during the hot season. It is easily prepared. Its nutritive qualities are borne out by the good results obtained from its use. Many hand-fed infants require no other food, and thrive well upon it. Before giving up hope in a troublesome case of infantile malnutrition, this food should receive a fair trial.

## ROBINSON'S PATENT GROATS AND PATENT BARLEY.

BY DR. ANDREW WILSON, F.R.S.E., ETC.

*Author of "A Manual of Health Science"; Lecturer on Health, etc., etc.*

I have pleasure in complying with the request that I should state my opinion of Robinson's Patent Groats, first, because of my long acquaintance with this food, and second, because I have advocated for many years in my public teaching the use of such products as calculated to improve the national health and well being. There is one phase of the health of the nation that has been repeatedly noted by sanitarians as deserving attention, namely, improvement in the development of bones and teeth. In our great cities there is witnessed a lamentable lack of the natural nutrition of both organs, and the great merit of Robinson's Patent Groats is that, prepared from the finest Scotch Oats, it presents all the constituents of that food in their natural form and quantities, while, as regards its assimilation, it can be readily digested by children and by invalids and others who find ordinary oatmeal to disagree with them. For children beyond the age of seven or eight months, when starchy foods can be safely given, Robinson's Patent Groats constitutes a typical food, rich in fat (a food essential for the nourishment and growth of the tissues), and equally so in nitrogenous or flesh-forming elements. I would add that there is no better food for persons of a constipated habit, and its use as a breakfast or supper dish, I am convinced, would prevent and cure most of the ordinary digestive ailments so prevalent among all classes.

With regard to Robinson's Patent Barley, this product represents the fine flour of the barley, which is not only adapted for use as an infant's food, but also for many other dietetic and medicinal purposes. In this food we find elements which, while contributing directly to the body's nutrition, also act specially as demulcents. Infants fed on this Patent Barley thrive and flourish—a fact I attribute to the easy assimilation of its albuminous matters, while the highest authorities on infant feeding universally agree in recommending Barley Water as the best and safest diluent of milk for hand-fed infants.

The use of barley water in medicine dates from a very remote period, and modern usage confirms the high value of this fluid as a drink in kidney and bladder affections, and in all cases in which it is desirable to soothe irritated mucous membranes. No better preparation for making barley water can be found than Robinson's Patent Barley, the process being rendered easy and simple from the fine state of division in which the flour is presented for use. As a summer drink barley water, with a little sugar and lemon as flavoring agents, is unrivalled. Its use has

evidently solved the vexed question of a palatable non-intoxicating beverage, and I am glad to find that many cyclists and athletes at large are using it in preference to other non-alcoholic beverages.

To sum up, it is evident, both from the results of chemical analysis and from physiological considerations, that in Robinson's Patent Groats and Patent Barley we have two natural foods which present us with the full nutritive value of the plant products whence they are derived. Their value in this respect is trebly enhanced by the fact that both for the child and for the adult they are to be regarded as foods which, being easy of assimilation, will nourish and satisfy when other articles of allied nature utterly fail.

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#### APOLLINARIS.

During the recent exhibition of the British Medical Association Apollinaris had a prominent place. This famous water is bottled at the spring at Neuenahr, Rhenish Prussia, Germany, and only with its own natural gas.

Medical men state that its anti-acid properties successfully combat dyspeptic conditions. By reason of its slight alkalinity and its sparkling character, it is very suitable for mixing with wine, etc., on account of its taste and in its qualities of heightening the flavor of the most delicate wines. It is now universally preferred as a dietetic and refreshing beverage.

A special commissioner of the *London Lancet* was recently sent to the Apollinaris Spring. His detailed report shows that notwithstanding the enormous annual output of 30,000,000 bottles there is no evidence whatever of the water and gas diminishing, but that the quantity is far in advance of the present needs. His report also shows the careful manner in which the water is collected from this Spring and bottled for exportation so as to retain all of its natural properties, and of the trouble taken to preserve the cleanliness of the water. It is also maintained that the effects of salts in natural mineral waters cannot be obtained from any artificial imitation of them.

Apollinaris has invariably obtained the highest recognition wherever it has been exhibited, for example:—

At the Paris International Exhibition, 1879, when it received the gold medal; at the International Health Exhibition, 1884; at the Centennial International Exhibition, Melbourne, 1888; at the Paris Universal Exhibition, 1889; at the World's Fair, Chicago, 1893; at the Antwerp Exhibition, 1894; and at the Dusseldorf Exhibition, 1902, where it received the highest awards accorded to natural mineral waters.

Apollinaris was also awarded the Royal Prussian State Medal in 1902. At the St. Louis Exposition, 1904, it received the Grand Prix.,

*The well known Apenta Water was also included in the Apollinaris Company's Exhibit.*

Apenta, the Hungarian Aperient Water, which is a natural purgative water from the Apenta Springs, at Budapest, Hungary, was also in the Apollinaris Exhibit. Apenta is remarkable for the richness of its sodium and magnesium sulphates, and its uniform strength and composition are noteworthy. The bottling of the water is under hygienic and scientific supervision.

Apenta received the silver medal at the Paris Exposition, 1900, and at Milan, 1903 ("Corso pro Infantia"). At the St. Louis Exposition, 1904, it obtained the gold medal.

"Sparklink Apenta Splits" were also included in the exhibit. This water is natural Apenta, but carbonated, and has been put on the market by the Apollinaris Company.

It is bottled at the Apenta Springs and is a pleasant and refreshing aperient for morning use.

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### THE DANGERS OF CATHETERIZATION.

There can be no doubt that many cases of cystitis are chargeable to infected or unclean catheters. One of the principal sources of this class of infection is to be found in the use of non-sterile lubricants—a fact which merely serves to emphasize, if possible, the paramount importance of using only a lubricant of absolute and guaranteed sterility. Such a medium is "K-Y" Lubricating Jelly, a product which has evoked the highest encomiums in genito-urinary circles. It is an antiseptic, non-fatty and perfectly soluble lubricant, supplied in a collapsible tube which constantly protects its contents from contamination. It is thus easily handled and its absolute sterility, both in and out of use, completely assured. Furthermore, "K-Y" Lubricating Jelly can be injected directly from the tube into the urethra without exposure to the air, this operation being effected by means of a small, hollow, burnished metal cone, easily sterilized in boiling water and provided with a thread that admits of a direct screw-attachment to the stem of the tube. In this way the parts, as well as the instrument, are lubricated, and in its possession of these various advantages are to be found the reasons why "K-Y" Lubricating Jelly so strongly commends itself to the unqualified approval of discriminating members of the medical profession.