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THE CANADA LANCET

VOL. XXXV. SEPTEMBER, 1901. No. 1.

THE PRESIDENT'S ADDRESS.

Being a Verbatim Report of the Address of Dr. H. H. Chown, of Winnipeg, at the Annual Meeting of the Canadian Medical Association held in Winnipeg on Aug. 28th.

AS this is the first time that the Canadian Medical Association has met in Manitoba I would like briefly to call attention to the future of the province. With less than 10 per cent of the arable land under cultivation our farmers this year have a crop estimated to yield 85 million bushels of grain. In the Territories to the west of us only about one-tenth of one per cent. of the available crop area has yet been touched by the plough. Between the Laurentian hills on the east and the Rocky mountains on the west and north of the forty-ninth parallel it is possible to grow the total amount of wheat now used in the whole world. We want population and we hope to make each of you a willing immigration agent.

Winnipeg is a young and vigorous infant, but I must not delay to point out its many interesting features. I have seen it almost from its birth onward and would probably be paternal in my estimation of its charms. Babies have their moments of repulsiveness and you will find many things to criticize in this growing city, but I trust you will

> "Be to its faults a little kind,
> Be to its failings ever blind."

It is within the scope of an address to a medical association to refer to the work performed here for the purpose of making the city a healthy one. Notwithstanding the level nature of the land, an excellent system of sewers has been introduced through all the streets. Arrangements have been made for regular flushing of the sewers by means of tilting basins at the upper end of each main sewer. As we have two rivers at our doors the problem of removing sewage was easily and safely solved.

The water supplied to our people is as pure as can be found in the world. Vienna boasted of having water which contained only 35 colonies of bacteria and had therefore to all intents and purposes a sterile water. A similar examination of the city water showed that there were in it only 9 to 30 colonies. A visit to the waterworks would well repay any

one who can spare the time. The water is taken from an artesian well 17 feet in diameter and 48 feet deep, and although they have been pumping for months a supply of from 2,000,000 to 3,000,000 gallons per day there is not the slightest evidence of any diminution of the amount flowing in. The well is supposed to tap an underground passage which runs from Lake Manitoba and as this lake is 130 miles long the supply is inexhaustible. The underlying rock formation in this section is a magnesian limestone and consequently the water contains a large amount of the carbonates of lime and of magnesia and is too hard for satisfactory use in boilers and hot water appliances. This is overcome by using Clark's method of softening by precipitation of these carbonates through the action of lime water. Seventy-five per cent. of the lime and 50 to 60 per cent. of the magnesia or 68 per cent of the total hardness is removed. The softening plant is unique on this side of the Atlantic and well deserves study at your hands. The water when taken from the taps in our homes is so cold that it requires no ice and the danger of importing disease germs in the ice is thus eliminated. The citizens of Winnipeg, both those of to-day and those of the future, will ever owe a debt of gratitude to the engineer, Col. H. N. Ruttan, who discovered the source, inaugurated the system, and carried it through to so successful an issue.

During the past year the subject of tuberculosis has continued to hold the paramount place in the interest of the profession. Congresses have convened at London, New York and Ottawa, for the discussion of this white man's scourge and for the formulation of means to overcome its sway. As Friday evening will be devoted to the full discussion of the subject I shall only call your attention to one point which I believe would well repay thorough investigation. Koch's tentative denial of the oneness of tuberculosis of man and tuberculosis of cattle still needs the proof of non-inoculability from cattle to man. In this new country when our farmers, young and free from tuberculous taint, live in newly-built houses which harbor no bacilli and are separated by long distances from their neighbors, tuberculosis constantly makes its appearance. We have here unconsciously, but no less disastrously, an experiment on a wide scale. If you can eliminate heredity, house infection and contagion from other cases, to what cause can you ascribe the origin of these outbreaks? Add to this that in every case where the farmers' cattle have been tested by tuberculin some of them have reacted strongly. The juxtaposition may not be proof positive, but its continuous recurrence certainly is suggestive. If our government would back up financially a careful study of this one point I am inclined to believe that information of great value would be obtained. Indeed, without assistance from the ruling authorities, the progress of stamping out this disease will be slow and disappointing. You can get money appropriated to suppress outbreaks of glanders or of lump-jaw, but when you appeal for aid in lessening the greatest scourge of the human race, you will find that the coffers are always empty.

Medical education continues and will continue to demand great attention at your hands. I commend very strongly to you the plan of Dominion registration as introduced by Dr. Roddick. Why should each practitioner who desires for any reason to move from one province to

another, be compelled to pass examinations that would pluck 99 per cent. of the examiners? Why should our respected teachers who were fathers in the profession in Canada when we were in swadding clothes, be made to submit to quizzing at the hands of those whom they instructed? The present system seems to me to be based on unnecessary self-appreciation on the part of some and base fear of competition in others. It is not the number of years given to study, or the number or variety of lectures attended that makes the competent practitioner. As an examiner and as a consultant I have often found the greatest failures among those who passed through curricula that are most lauded and most strongly supported. I regret that in the highest standard now demanded for matriculation no place has been given to logic and metaphysics. Every workman who knows the nature of the tools he uses is more reliable and more proficient than his ignorant neighbor. Surely a clear knowledge of the mind and a thorough study of the laws of reasoning would form an invaluable addition to the equipment of the physician. The present mode of training our students makes keen their powers of observation, but leaves them without any conception of how to join together all the disjointed facts that have been noted into an accurate and full diagnosis. Want of clear reasoning is more frequently the cause of mistakes than inability to gather together the symptoms of the case. Then how much more satisfactorily would cases of mental instability be dealt with if the physician understood the functional, if I may use the word, disturbances to which the mind is liable. Would there be the same field for Christian science, hypnotism, telepathy, osteopathy, electrical treatment, if we were well posted in the important influence of mind on matter. The almost universal habit of giving a prescription of drugs to each one applying for relief from neurotic affections, is the foundation on which is constructed the greater part of the success of quack treatment. An honest acknowledgement of our inability to locate the cause of many pains and a strong demand for further opportunities of observation, would ultimately redound to our credit, though for a moment a crude denunciation might follow us.

It would be the height of presumption for me to describe the status of medicine but it may be interesting to review the account of our knowledge a hundred years ago. We all know the commanding sphere occupied by our science and art now, but few have taken the trouble to inquire as to the real knowledge possessed by our predecessors at the beginning of the nineteenth century. Bichat, early in the century, announced the difference between pneumonia, pleurisy and bronchitis. This differentiation was made on constitutional symptoms as the physical examination of the lungs was unknown. Although percussion was employed over a hundred years ago, mediate ausculation was first introduced by Larence when one fifth of the century had passed by. The description given by Watson of tubercle is worth comparing with our present knowledge. "Tubercules," he says, "are composed of unorganized matter deposited from the blood, of a yellowish color, opaque and friable and of about the consistence of cheese." This corresponds well with the process of caseation as we know it to-day. He also describes miliary

tubercles very clearly. "The lungs are often studded with a number of small granules of firmer consistency, almost as hard as cartilage, and of a bluish-gray color." "Whatever," he adds, "may be the true theory respecting these little gray bodies, it is certain that they acknowledge some intimate connection with the true cheesy tubercle." How much clearer is our knowledge of this disease now, and how widened is our conception of the role played by the bacillus tuberculosis.

There was no distinction known between the varied forms of continued fever when the last century began. Typhus and typhoid fever were not differentiated. Yellow fever was believed to be due to local unsanitary conditions and to be separated from other febrile disorders only by its severity and by its limited locality. "To say that a febrile disorder is contagious is the same thing as to say that it is produced by an animal poison. These animal poisons affect changes in the blood whereby they are abundantly multiplied or reproduced. In order that a specific animal poison should effect its own reproduction in the blood it is requisite that a certain ingredient should be present. If the ingredient is exhausted the same disease cannot be again produced by the agency of the poison." This is really a very clear statement of our doctrine of contagion and immunity requiring few changes to meet our present day knowledge.

Malarial fever was supposed to be caused by "certain invisable effluvia or emanations from the surface of the earth." The role of the festive mosquito in spreading this disease as well as yellow fever was then undreamed of. They did not believe in the contagiousness of phthisis but explained its prevalance by constitutional predispositions. Diathesis figured largely in their etiology. Watson states that tubercular diseases are liable to occur principally in the phlegmatic with pale complexions, narrow chests, flabby muscles and feeble circulation, in the sanguine with transparent, rosy skin, long silky eyelashes, and unusual mental precocity; and in the bilious with dark, muddy complexions and mental and bodily sluggishness. Surely under these three heads all of mankind would be included and the value of the explanation rendered useless.

The energetic agent of proprietory drugs was as active then as to-day and found a too easy and credulous hearer among the doctors. I learn from a presidential address delivered before the Medical Society of the State of New York, that "indicated gout water" the composition of which was unknown, was nevertheless approved of fully by the faculty in London, Paris and New York. How many of us to-day succumb to the temptation of using some much vaunted remedy about which our total knowledge is embraced in the puffing of some verbose commercial traveller? As a proof that there is nothing new under the sun, I may mention that in 1810 the "gold cure" was recommended to the attention of every practitioner. This most valuable discovery was said to cure "syphilis, scrofula and scirrhus uterus," and more still, to have succeeded in nearly every trial. Credulity was rampant then as to day. and the poor patients were compelled to swallow gallons of chemicals whose only potency lay in the assumed promises of the prescriber. Palatability

is much more sought after to-day, and the belief in efficacy of a mixture as proportionate to its nauseousness has passed away. This is partly due to developments in chemical analysis, for a century ago, they had Cinchona bark, but not quinine, opium, but not morphine, nux vomica, but not strychnine. Bleeding was in constant use, and the heroic way in which it was performed must evoke our admiration for the courageousness of both patient and physician. They counted blood not by ounces, but by pints. Even after this onslaught upon the life-giving fluid they did not hesitate to follow on with such doses of purgatives and emetics as would cause the ruin of professional standing in any one who ventured such medication to-day. I can only explain the recovery of their patients by the surmise that they became so limp and helpless that the fair and honorable disease germ retired from the contest rather than gain a victory over so poor an antagonist.

In surgery greater progress has been made than in any other department of our art and science. Wounds in 1800 were supposed to require inflammation to produce union "pus bonum et 'laudabile'"accompanied forms of inflammation and indicated that all was going regularly. As they had no anaesthetics they resorted to the use of infusions of tobacco taken internally to place their patients in the conditions of the sea-sick passengers who is so prostrate that he cares not what operation is performed so long as the end comes quickly. Too surely indeed did death follow the use of the knife, for those who survived the shock had to run the gauntlet of that list of wound infections which has now been almost banished by antiseptics. The appreciation of surgical cleanliness as taught by Lord Lister and his followers has enabled the surgeon to widen the field of his labors, so that scarcely any part of the human body has during the past twenty years escaped the use of the knife. I have not heard of anyone removing the pineal gland and possibly this holds the proud position of being the only unassailable organ. But I warn it not to be too elated or some surgeon will snatch world-wide fame by removing it. The safety with which major operations can be performed, the slight amount of pain which follows and the rapidity with which the wounds heal, make the practice of this branch of medicine an attractive and alluring occupation. It is unnecessary for me to enter into a detailed account of the newer operations now performed, the change has been too recent and too striking to have escaped the notice of every practitioner.

Anaesthetics and antiseptics have played a benevolent role not only in surgery but also in obstetrics. The expectant mother can await her approaching confinement without dread of agonizing pain, as the modern accoucheur will control with chloroform the most violent suffering. Puerperal fever has been largely suppressed by our recently acquired knowledge of its cause and the application of the necessary means of prevention. Deaths from the sequelae of childbirth have been greatly reduced during the last quarter of a century

What has the future in store for us? I will not attempt to prophecy as my qualifications are not all attested. We all know that there are large questions yet to be settled and therefore the need for patient and preservering investigation is still paramount. Bacteriology

and haematology are in their infancy, but have been so illuminating in their short development that we expect a flood of light yet to come from these sources. No one can sit down complacently and feel that the summit has been reached, rather should each of us resolve to work more faithfully, in even a humble capacity to add to even the sum of the knowledge of our chosen profession. Can not some one grasp the kernel of truth that underlies the fallacies of Christian Science, Dowieism, faith-healing et hoc genus omne? Are we not too prone to rely on drugs and to forget the control of mind over body? If many of the ailments brought to our notice are imaginary then why not treat through the source of the imagination rather than through the stomach? I feel that a duty rests upon us to get at the true cause of all forms of disease and rescue the public from both the honest fanatic and the ignorant pretender by doing not only all that these claim, but doing more and doing it better.

Let me conclude this address by quoting a layman's opinion of what a physician should be and do. The standard is a high one and if we can measurably achieve success in the direction pointed out we will do much to gain and hold the confidence of the public as the only true guides in matters of health and sickness.

The Rev. J. M. Buckley, of New York, says :—"An intelligent, educated, experienced and candid physician studies both the mind and the body, relieves the sick man of the responsibility of treating himself, strengthens him by hope, and encourages him by his personal presence and manner. He understands the mineral, plant and animal substances included in the materia medica, he knows that not medicine, but inherited vital force is the primary cause of health and healing, and of the repair of injuries. He knows also by observation and experiment that nature can be assisted, but he interferes only when it is safe and necessary, such a physician is too learned and too honest even to do he knows not what, because he knows not what to do. He can relieve the pains of innumerable diseases, smooth the pathway of sufferers to the inevitable end and to convalescents he can give such hygienic hints as may permit the return of the malady or save them from something worse. Certain that all men must die and that all die of old age, disease, accident, or intentional violence; he claims by hygiene, medicine and surgery, to assist nature to delay the inevitable and to render the journey to it more endurable."

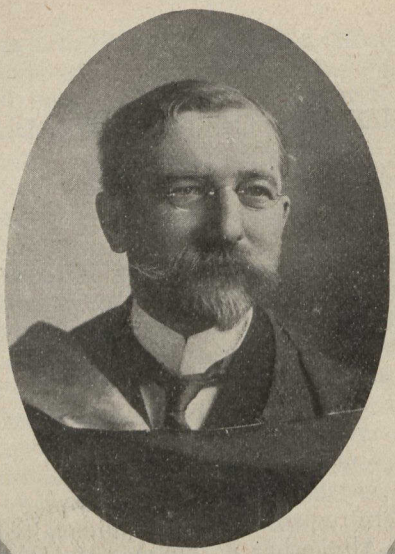
*THE WINNIPEG MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

By George Elliott, M.D., Secy. Canadian Medical Association.

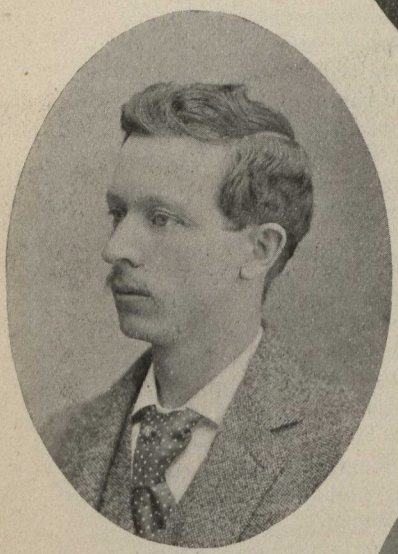
If numbers count, if quality of papers counts, if social functions count, then the 34th annual meeting of the Canadian Medical Association in the City of Winnipeg, in the year 1901, must be pronounced the best meeting,—and has been pronounced by "old-timers," the best meeting since this Association was organized in 1867. We know that comparisions are generally deemed odorous, but honour must be placed where honour is due; and although not quite up to the Toronto meeting of 1899, so far as numerical representation is concerned, the Winnipeg meeting must take first rank in everything else and second place by actual count. On the first day there were registered 130, an unusually large representation for the initial day. Altogether 177 signed the register, being 24 in excess of the meeting at the Capital last year. Promptly at 10 o'clock on the morning of the 1st day, the President, Dr. H. H. Chown of Winnipeg, called the meeting to order. On the platform were Drs. R. W. Powell of Ottawa, past-president of the Association and F. N. G. Starr, general secretary. Chief Justice Killan, who was down to deliver the address of welcome was indisposed; the President called upon Dr. J. H. O'Donnell of Winnipeg to officiate in his absence. In a brief but interesting address. Dr. O'Donnell reviewed the history of the medical profession in that city since the year 1869, the date when he appeared upon the scene, a time when Winnipeg was but an outpost of civilization situated on the crumbling banks of the Red River within the sounds of the bells of St. Boniface made famous by the poet Whittier. When Dr. O'Donnell arrived upon the scene in 1869 he found located there several able men in the ranks of Medicine: Dr. Cowan who had lived in Edinburgh University, the late Curtis J. Bird who received his preliminary education at St. John's College and who remained for sixteen years in Guy's Hospital, Dr. Beddon and Dr. Bund, the latter being one of the most learned of men. At the close of the address of welcome Dr. R. W. Powell stepped forward to introduce the President-elect. Dr. Chown briefly returned thanks for the honour which had been conferred upon him one year ago at Ottawa, and welcomed the visiting delegates on behalf of the profession of Winnipeg. Upon motion Dr. Edebohls of New York and Dr. Stanley Sutton of Pittsburg were welcomed to the Convention and requested to participate in the discussions.

The first subject was the question of a formation of a Medical Defence Union. At Sherbrooke in the eastern townships an organization of this character has existed now for some little time having a membership of something over sixty and working with eminent satisfaction under the

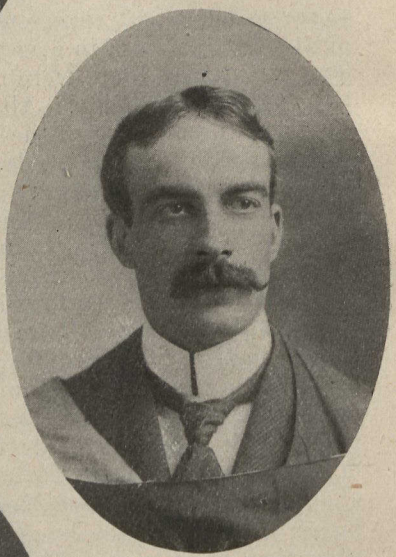
* Written specially for The Canada Lancet.



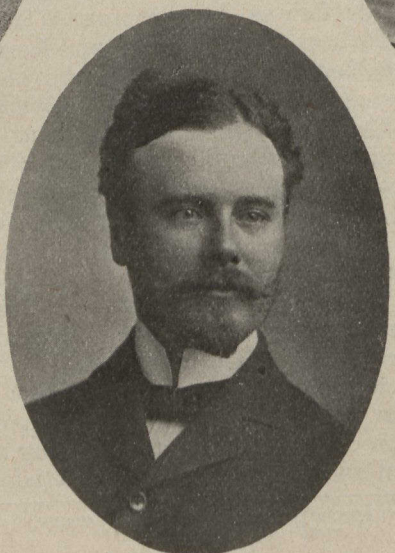
DR. H. H. CHOWN
WINNIPEG
PAST PRESIDENT CANADIAN MEDICAL ASSOCIATION



DR. TODD, WINNIPEG
CHAIRMAN RECEPTION COMMITTEE



DR. W. HARVEY SMITH
WINNIPEG
RECEPTION COMMITTEE



DR. GEORGE ELLIOTT, TORONTO
SECRETARY-ELECT OF CANADIAN MEDICAL ASSOCIATION

patronage of The St. Francis District Medical Association. This Association had delegated Dr. Russell Thomas of Lennoxville, Que., to proceed to the meeting of the Canadian Medical Association, to lay before that body the scheme of Medical defence which they had adopted, and to hand it over entire to the Canadian Medical Association if the latter deemed it advisable. A special committee was appointed on this matter one year ago at Ottawa, with Dr. V. H. Moore of Brockville as Chairman. In his absence Dr. W. S. Muir reported for the committee that a Medical Defence Union be organized, and that its name be the Physicians' Protective Association. The Canadian Medical Association unanimously adopted this report and elected the following officers for the first year:—President Dr. R. W. Powell, Ottawa; Secretary Dr. McKinnon, Ottawa; Treasurer Dr. James Grant Jr., Ottawa.

It is very gratifying to have to report that this matter has been finally settled and that a Medical Defence Union has been formed in Canada, which will hereafter be known as the Physicians' Protective Association. Dominion Registration came up once more for discussion and delegates from every province, who were present, except from Prince Edward Island, pledged their respective provinces in favor of Dr. Roddick's Bill. The address in medicine was delivered by Dr. J. R. Jones of Winnipeg, who dealt in a masterly manner with the question of Medical Education. He considered that the great aim of the medical profession at the present time in Canada was to create a Dominion Medical Board, upon a sound and enduring basis, and through the instrumentality of the Canadian Medical Association,—a Board whose qualification can be registered in every Province of the Dominion. And he further thought that the profession in Canada should not rest there but should proceed until the qualifications should not only be Canadian but Imperial as well, capable of registration in Great and Greater Britain. He directed the force of his criticism upon Medical Matriculation Examinations, the most lamentable defect in these being always found in the English paper. The criticism is a timely one; and examiners for Universities who pass students on into medical studies poorly equipped in elementary English are doing a grave and serious wrong to the profession of medicine and the community in general. The didactic lecture, too, had the searchlight turned upon it and much sympathy was expressed for the over-lectured and undertaught student. Particularly, was the didactic lecture on Anatomy singled out; and the lecturer voiced his opinion that persistent work in the dissecting room under the guidance of an experienced demonstrator who will be constantly describing, discussing, and orally examining the student, was the rational and effective method of teaching Anatomy. Dr. Jones upheld the "case" method of teaching advocated by Mr. Cannon of Harvard University in 1900.

The President's address was delivered on the opening of the afternoon session of the first day. Dr. Chown first referred briefly to the City of Winnipeg and the Province of Manitoba, a province which is able to produce this year 85,000,000 bushels of grain. The excellent system of sewers of Winnipeg, and the water supply was also described. This water is as pure as any in the world, an examination of which would

show that there were from only nine to thirty colonies of Bacteria in it. Winnipeg derives its water from an artesian well seventeen feet in diameter and 43 feet deep and although from 2,000,000 to 3,000,000 gallons are pumped out per day there is no diminution in the supply, as the well is supposed to tap an underground passage connected with Lake Manitoba, a lake 130 miles long; therefore, Winnipeg's water supply is inexhaustible. Dr. Chown made an important reference to the subject of tuberculosis, and as his reference is one full of food far thought, it is here quoted in full. "In this new country when our farmers young and free from tuberculous taint, live in newly-built houses which harbor no bacilli and are separated by long distances from their neighbors and tuberculosis constantly makes it appearance, we have here unconsciously but no less disastrously an experiment on a wide scale. If you can eliminate heredity, house infection and contagion from other cases, to what cause can you describe the origin of these outbreaks? Add to this that in every case when the farmer's cattle have been tested by tuberculin some of them have re-acted strongly." This is a point which will bear thorough investigation notwithstanding Koch's tentative denial of the oneness of tuberculosis of man and tuberculosis of cattle. A North Dakota epidemic was described by Dr. Jas. McKenty of Gretna, Manitoba. This paper gave an interesting account of an epidemic of Cerebro-Spinal Miningitis which occurred in the winter and spring of 1893, and which was limited to an area of fifty miles from east to west, and twenty miles from north to south. Twenty-five out of seventy cases ended fatally.

Dr. A. J. Macdonnell of Winnipeg, read a paper on a case of Splenic Anaemia; while Dr. J. H. Hutchison of the same city devoted his attention to physical development, criticizing severely the system of education which developed the mind far out of proportion to the physical body. He also strongly advocated periodical lectures in the schools by duly qualified physicians to separate classes of boys and girls on the subject of sex. Dr. W. H. Pepler of Toronto, reported several interesting cases treated by the super-heated dry air method. Either as a result of Dr. Pepler's paper or having been gotten up specially for the delectation of the visiting members, a fierce hail storm broke over the city at this moment. As Dr. Pepler disclaimed any collusion in the matter this great display of nature must be set down to the anxiety of Winnipeggers to let the east see what the west could do in the way of a Manitoba blizzard in summer time. Many of the visiting delegates, however, braved the unusual inclement atmospheric conditions and dodged among the hailstones to the Winnipeg General Hospital, where the directors were "at home" from 5 to 7 that afternoon. The visitors were shown through the various wards of the hospital and expressed surprise at the completeness of the appointments. A capital luncheon was served in the nurses' home.

On the evening of the first day a reception was given by the Ladies' Entertainment Committee, at Wesley College. This brought together a large and fashionable gathering which completely filled the beautiful convocation hall of the College. The Violin-playing of Miss Archer of Toronto, and the piano-solo by Mrs. Sanford Evans, were exceptionally fine and thoroughly appreciated by all; while Dr. W. H. Drummond

captured the audience with "Johnny Gouteau" and "Lettle Bateese.' The Association met promptly at 10 o'clock on the following morning, and proceeded with the election of a large number of new members. Dr. Evans of Wisconsin upon motion of Dr. J. F. W. Ross was tendered the privileges of the Association. The nomination of the Nominating Committee resulted in the following sixteen gentlemen being elected: Dr. Muir of Nova Scotia; Dr. Christie of New Brunswick; Drs. Bray, Riordon, Bruce and MacDonald of Ontario; Dr. Roddick and Smith of Quebec; Drs. Kennedy, McKid and Smith of the Northwest-Territories; Drs. Lefevre and Tunstall of British Columbia; Drs. Blanchard, Harvey Smith and Thornton, Manitoba.

Dr. G. A. Kennedy, of McLeod, Alberta, contributed a paper to this session on the subject of mild small-pox which dealt with the recent outbreak of this disease in the Northwest Territories. It is particularly important to note that the greatest number of cases occurred amongst the French Halfbreeds who had never been vaccinated. Treaty Indians on reserves did not suffer to any extent, annual vaccination being the rule. And most noteworthy, not one case was seen or heard of amongst the Galicians,Doukhobors or Romanians,a fact due to compulsory vaccination in youth, and further, because they were re-vaccinated on their recent passage across the Atlantic and at Halifax. In discussing this question, Dr. Montizambert stated that the facts relating to the Doukhobors and Galicians was the most valuable portion of the whole paper. Dr. James Patterson, Quarantine Officer for the Dominion Government, furnished the following information for Dr. Kennedy's paper;—"There is a colony of Galicians east of Edmonton numbering nearly 10,000 souls. On the west and to the south-west of them is a colony of French Halfbreeds. Among the latter there were over 500 cases of all grades of severity. On the east of them is another colony of Halfbreeds, where about 100 cases existed. The breeds were unvaccinated; the Galicians thoroughly vaccinated. The breeds passed constantly from one colony to another, backwards and forwards through the Galician colony, yet not one case has occurred up to date amongst the Galicians." A very interesting case was related by Dr. J. F. W. Ross of Toronto,—a case of chronic ulceration of the stomach simulating cancerous disease; while "Some Forms of Hyperacidity and Their Treatment," was dealt with by Dr. C. F. Martin of Montreal. The following resolution was at this stage adopted by the meeting:—"Resolved that in view of the general prevalence of smallpox throughout the continent this Association desires to urge upon the profession and the public generally the necessity of vaccination and revaccination." The address on Gynecology was delivered by Dr. Thos. S. Cullen. This took the form of a lantern slide demonstration. The subject treated of was cancer of the uterus, a large number of excellent limelight views being shown. The demonstration which occupied over an hour was thoroughly appreciated and at the close Dr Eccles of London moved a vote of thanks to Dr. Cullen which was seconded by Dr. Gray of Winnipeg and adopted unanimously amid enthusiastic applause.

Another prominent feature of the meeting was the lantern demonstration on skin diseases conducted by Dr.Shepherd of Montreal. Amongst other views which were very interesting and instructive were cases of

smallpox, eruptions from salicylate of soda, cases of blastomycetic dermatitis, psoriasis of the nails and views of feigned eruptions. Dr. F. F. Westbrock of the University o Minnesota discussed the varieties of distribution of bacilli diphtheria and their clinical significance, exhibiting a carefully prepared chart which showed in tabulated form the results of numerous examinations in schools. An unusually interesting specimen was exhibited by Dr. H. A. Bruce of Toronto, a specimen of a hairy tumor which he had extracted from the stomach of a young married woman of twenty-six years of age. This mass of hair weighed twenty-three ounces, was two feet in length, was two inches in diameter at the larger end, and gradually tapered down to a point at the smallest. Dr. Lapthorn Smith reported a case of transplantation of the ureter for cure of uretore-vaginal fistula. Three years ago when in Leipsic Dr. Smith saw Sanger perform this operation; and to Dr. Smith is due the credit of having been the first to perform this operation in Canada, and operation which has been highly satisfactory. Syphilis as seen by the ophthalmic surgeon was the title of a paper read by Dr. F. Buller, of Montreal, in which he stated his disbelief in the efficiency of the protiodide of mercury treatment at least as ordinarily administrated. He does not believe it a reliable anti-syphilitic, pinning his faith rather to the inunction process or to gray powder. The subject of smallpox came up a second time for discussion which followed on the reading of a paper by Dr. H. M. Bracken, Health Officer of Minnesota, the subject of whose paper was an extensive one in that it sought to deal with the present outbreak of smallpox in America. According to Dr. Bracken, Cuba is likely responsible for the introduction of smallpox into North America, as it was probably imported by refugees from the island of Cuba before war broke out between that country and Spain. Dr. Russell Thomas asked a pertinent question,—"Where is the best vaccine manufactured? To this query, no one was good enough to vouchsafe any answer; although it would be valuable information to the medical profession at the present time. Dr. Bracken thought that vaccinate was frequently spoilt by being kept at a too warm temperature. It could be safely kept in an ice-box but must not be frozen. He believed that eighteen days was a proper time to quarantine people who had been exposed to infection. In the absence of Dr. W Gordon M. Byers, of Montreal, Dr. C. F Martin of the same city read a paper on the desirability of a reccognition and isolation of trachomatous patients in Canada. The author believes that there are many unrecoguized and untreated cases of Trachoma scattered here and there throughout the Dominion of Canada, in certain districts of Manitoba, in certain centres in the eastern counties of Ontario and others in Quebec; and he believes that it is high time the Dominion Government took action in the matter of barring our doors against Trachomatist immigrants. Dr. Montizambert said that the subject was under Government consideration.

A practical paper was that presented by Dr. J. L. Gray, of Chatham. It described the methods followed by the author in the treatment of cases of typhoid fever. Dr. Bray does not believe much in the cold bath or in cold sponging, but believes that frequent sponging with tepid water is just as good and not near so distasteful to most patients. In his hospital practice he is in the habit of using the electric fan after sponging with

the tepid water, and he has found this plan very satisfactory, especially to young and sensitive children. A marked and pleasing feature of the Canadian Medical Association was that all the leading addresses were delivered by Canadians, one of whom, according to Dr. Chown, has gone wrong in absenting himself from his native land. Dr. O. M. Jones, of Victoria, although not native born, is yet a Canadian practitioner. For several years he acted in the capacity of assistant to Mr. Treves, and his work on the Pacific coast is bringing him into world-wide prominence. In a quiet and unobstructive manner he delivered the address in surgery, taking for his subject the surgery of the stomach. He compared surgical diseases in Western Canada with those in the East, and stated that he had often found Western sufferers more impatient, which often demanded severer methods. He illustrated this by citing a humourous incident. A lodging-house keeper out West was informed that one of her lodgers was to have an operation performed on a Wednesday. She immediately sat down and wrote to the surgeon asking him to postpone it until Friday as her daughter was to be married on Thursday and she didn't want the corpse home until after the wedding. Dr. Jones has performed 26 operations on the stomach, his first operation being in 1893. He has performed gastro-enterostomy fourteen times with the Murphy button, and in only one case was there any trouble. Dr. Henry Howitt, of Guelph, Ontario, described an original operation for the relief of ovarian-tension pain, which consists in a number of cross-sections quickly made through the tense capsule of the ovary in such a manner as to divide it. Adhesions and hemorrhage give rise to no complications. The relief for the patient is both immediate and permanent. Dr. Lapthorn Smith stated that he had never heard of this operation before and considered that it was original with Dr. Howitt.

The afternoon of the second day of the meeting was taken up by a pleasure trip down to lower Fort Garry. The "At Home" given by Mr. C. C. Chipman, Commissioner of the Hudson's Bay Company, and Mrs. Chipman at their picturesque residence on the banks of the Red River, was a social function held in honour of the medical men attending the Convention, which will long remain green in their memories. This Fort was built in 1831 by the Hudson's Bay Company, ten years after the erection of the fort of the same name at the junction of the Red and Assinaboine Rivers. Though seventy years old the buildings are still in splendid condition and far from falling into ruin. The place has been very carefully preserved and is now as habitable as when first erected. The 90th Regiment Band provided excellent music during the afternoon, and a splended champagne lunch helped the medicals to forget the scientific delights of the foregoing session. Especially interesting in one of the rooms of the residence was what might be called the picturesque bordering of the wall paper. This, done by Indian hands and representing a Company of Blackfeet going out to do battle against another tribe of Indians, was very much admired and discussed by the visitors. It is needless to say that a very cordial vote of thanks was passed to the Commissioner and his lady for their hospitality. On the afternoon of the third day a special trip was made to the Ogilvie Mills where the process of milling was inspected in all its various branches by

the medicals, who, after passing from the dry mill, were regaled with another very fine champagne luncheon. Later on in the afternoon a reception was held at Government House where the Lieutenant-Governor and Mrs. McMillan showed what western gubernatorial hospitality was like. On the last evening a symposium on tuberculosis was held, which was introduced in an able paper by Prof. Russell, of the University of Wisconsin, who considered the subject of the "great white scourge" from two aspects: first, from the stand point of animal industry, and second, from that of public health. Dr. A. J. Richer, of Montreal, contributed to this symposium by reading a carefully prepared paper on the sanitarium treatment of tuberculosis, which he considered is made up of rest, out-door life, over-feeding and medical supervision, the latter of which he described as the key-note to success in phthisical treatment. Dr. Gilbert Gordon, of Toronto, contributed a paper on the aetiology and the early diagnosis of pulmonary tuberculosis. These papers incited a prolonged discussion in which Dr. Lafferty, of Calgary, warned the profession in Ontario against sending advanced cases to the Northwest Territories. Dr. Barrick of Toronto took part in this discussion pointing out that Ontario was leading in regard to the treatment of tuberculosis and he said that he hoped to see the Sanitarium brought with a wide open door to all conditions of life. At the suggestion of Dr. Brett of Banff, a Resolution was unanimously adopted calling on the Parliament of Canada to grant aid in the providing for the establishment of Sanitoria and for the prevention and treatment of tuberculosis. Dr. W. S. Muir of Truro, N.S., in presenting the report of the nominating committee expressed the regret of that committee at having to accept the resignation of their General Secretary, Dr. F. N. G. Starr who now for so many years had worked so faithfully and so labouriously for the great good of the Canadian Medical Association. The Committee named Montreal as the place of meeting in 1902, throwing out a suggestion that the meeting of 1903 might be held in British Columbia. The following officers were elected for the ensuing year:—

President—F. J. Shepherd, Montreal.

Treasurer—H. B. Small, Ottawa

General-Secretary—Geo. Elliott, 129 John St., Toronto.

Executive Council—Jas. Stewart, T. G. Finley, J. M. Elder, all of the city of Montreal.

A very noticeable feature of the Winnipeg meeting was the generous space given by the local press to the reports of the proceedings. This a good many members thought altogether unnecessary and considered that it would be better if this publicity especially as regards technical papers and case reports be curtailed. The Canadian Medical Association is now in a prosperous condition. It is an Association of great importance to medical practitioners throughout the whole Dominion of Canada. The new officers will have to look well to their laurels if they desire to outstrip previous meetings or if they even desire to equal them. There are said to be nearly 6,000 physicians in Canada and with the Association meeting next year in the commercial centre of the Dominion, there would seem to be no valid reasons why 5 per cent. of the medical population could not be got together in one Convention at Montreal in 1902.

THE PATHOLOGY OF GASTRIC ULCER.*

By H. B. ANDERSON, M.D.; L.R.C.P., M.R. C.S.

Professor of Pathology, Trinity Medical College, Pathologist to the Toronto General & Grace Hospitals, Physician to St. Michael's Hospital, Children's Hospital, etc.

IN the discussion of the subject assigned to me I shall make no reference to the rarely occurring ulcers resulting from the breaking down of tubercular foci, syphilitic gummata, to malignant ulceration nor to those ulcers arising from the action of irritant poisons as arsenic, acids and other corrosives. Neither shall I refer to ulcers arising during the acute infections but shall confine the discussion to the commonly designated simple, round, peptic or perforating ulcer. From the similarity in all essential points, however, as in etiology, appearance, locality and clinical course, I think that the corresponding ulcers at times occurring in the lower end of the oesophagus and the first part of the duodenum might properly be briefly noted in passing.

Gastric ulcer was not unknown to the ancients, and Celsus mentions the condition and even describes a mode of treatment. The simple, perforating, round or peptic ulcer is now recognized as of comparatively frequent occurrence. Thus Dietrich, in 10103 autopsies, found 126 open and 224 cicatrized ulcers, a proportion of about 3.4 per cent. Brinton Lebert, Jaksch, and later Eichorst, Stewart and Welch, from post mortem records, place the incidence of the condition at about 5 per cent. One authority states that the proportion of cicatrices to open ulcers is as 3 to 1.

The condition is said to occur more frequently in Europe than in America, and if the figures already quoted represent the frequency of occurrence in Europe, I think this statement will accord with the clinical experience of most observers in this country as it certainly does with my experience in connection with autopsies made in Toronto. A reasonable explanation for the less frequent occurrence of gastric ulcer in this country is found in the rarer occurrence of chlorosis and other associated etiological factors in our more scattered population than in the more densely populated older countries. In reference to age there is a pretty general consensus of authority that gastric ulcer is most frequent in the prime of life—from 20 to 40 years of age, while it is rare but by no means unknown at the extremes of life. Ewald thinks that the condition is not so rare in early life as ordinarily supposed and quotes Birsch-Hirschfeld in confirmation of this view as well as citing two cases coming under his own observation. The greater and more rapid reparative power in the young, however, probably causes them to heal with fewer observable signs.

The mortality on the other hand is greater from 40 to 60 years of age, undoubtedly associated with the lesser reparative power at that period of life.

As to sex females are more frequently affected than males—in about the proportion of two to one. In the case of the corresponding ulcer in

*Read before the Ontario Medical Association.

the duodenum these figures are more than reversed, the latter being more frequently found in males no doubt due to the etiological association of the latter with extensive superficial burns, which occur in men so much more frequently than in women.

Occupation plays a less important role, though gastric ulcer is stated to be more common among cooks owing to the injury done the stomach from the habit of tasting hot foods, among shoemakers, tailors and those engaged at work wherein pressure on or injury to the gastric walls may occur, and also among servant girls and those in other walks of life where chlorosis is particularly common.

Race, climate and habits can only exert a very indirect influence. Trauma has been credited with the power to produce gastric ulcer in some cases and this is partly confirmed by experiment in animals in which the condition has been produced in a few instances. Trauma does not act directly however but by producing haemmorrhage into the walls of the stomach which allows the operation of the more important causative factors, to be discussed later. The well-known clinical fact that large superficial burns are frequently followed by duodenal and occasionally by gastric ulcer has been explained as being due to minute emboli plugging some of the small vessels of these organs, either altered redblood corpuscles, blood platelets or other tissue debris from the seat of injury or at times probably septic emboli may carried from the part. That peptic ulcer has a frequent etiological association with other diseases, particularly chlorosis and various forms of anaemia primary or secondary, menstrual disorders and certain neuroses is a well founded clinical observation. That syphilus, chronic heart disease, sclerosis, amyloid or other degenerations have any influence is not so evident as the age, sex, and other conditions commonly associated with gastric ulcer do not bear out the statement. Fatty degeneration of the vessel walls, thrombosis or embolism of the terminal branches of the gastric vessels, are probably of more consequence. The conical form of the ulcer in itself is somewhat suggestive of the affected area corresponding to the distribution of a minute vessel and there are some experimental data which support the view. Virchow especially believed that emboli in these minute vessels was a frequent cause.

The various factors already mentioned, however, are only of secondary importance and only active in conjunction with the more important ones to be now considered. The possible digestive action of the gastric juice in producing the peptic ulcer was long ago pointed out, especially by Pavy, and was in part substantiated by observation. The localities where the ulcer is found—at the lower end of the oesophagus, in the stomach and first part of the duodenum, situations exposed to the action of the secretion is in itself almost convincing that it exerts an important influence. This is further strenghtened by the comparatively common observation of post-mortem digestion in the same situations occurring especially in cases of sudden death from disease or accident, at a time when the gastric juice was active. The more thorough chemical examination of the gastric secretion made possible by the introduction of the use of the stomach tube and test meals by the German school has

furnished more direct proof of the correctness of the supposition. The estimation of the total acidity of the gastric juice after a test meal will show in the large majority of cases an increase in the proportion of H.Clf. present. Taking 40 or 50 per cent. to represent the normal degree of acidity after an Ewald's test breakfast, most cases of gastric ulcer will show an acidity of 70 or upwards. That a hyperchlorhydria is not constantly found in cases of gastric ulcer is no proof that it may not have existed at an earlier period in a given case as the acid may subsequently have been reduced owing to more or less gastritis that often follows on the wake of the ulcer. Time will not permit of the full discussion of the modus operandi of the hyperacid secretion in producing the condition. But the case is well put by Ewald in the statement that the other factors already described as having some etiological relationship with gastric ulcer cannot be operative in the presence of a normal gastric juice and normal blood. There must exist a disproportion between the acidity of the gastric juice and the composition of the blood. The old and once widely accepted explanation that normally auto-digestion of the walls of the stomach was prevented by the alkaline reaction of the blood in its wal's, owing to later investigations which have shown that the upper layers of the gastric mucosa are acid in reaction, are no longer tenable. The prevention is not to be explained by a simple chemical reaction, but is due to the resisting power inherent in the living cells of the part. The clinical importance of this matter cannot be overestimated with reference to both prophylaxis and active treatment of gastric ulcer. Having once admitted the potency of the hyperacid secretion in the etiology of gastric ulcer the part played by other factors is readily understood. Thus embolism, injuries to the gastric walls, haemorrhages, into the mucosa and the various conditions which reduce the general nutrition of the body or the local nutrition of the organ itself may act in conjunction with the chief factor but not of themselves.

With reference to the bacterial origin of this form of gastric ulcer so little proof of it exists that I shall not take up your time in trying to disprove it.

In dealing with the pathological anatomy of the condition I shall be brief. Gastric ulcers are usually single, though occasionally two and in rare instances many are found, 34 having been noted in one case. The favorite sites are near the pylorus and along the curvatures and posterior wall. They are much less frequent on the anterior wall and at the cardia.

In size they vary from a diameter of less than a five cent piece to that of a quarter, though at times owing to coalescence or to irregular extension much larger areas may be involved. In shape the classical punched-out appearence or conical shape is well known though irregular forms are by no means rare.

The more acute ulcer has thin edges, but the more chronic ones may show much thickening and infiltration of its margins. They extend to any depth in the stomach walls, the submucus, muscular, or peritoneal coats at different times appearing at the bottom.

The terminations in cases of gastric ulcer now remains to be discussed. Cicatrization fortunately occurs in the majority of cases. There is more or less contraction of the cicatrix in healing, however, depending upon

the depth of the gastric walls involved and the extent of the ulcer that has healed and this may give rise to serious subsequent trouble, especially when near the pylorus, where constriction of the orifice and consequent dilitation of the stomach may result. Hour glass deformity of the organ occurs in other cases.

Adhesion of vessels and recurring, sometimes fatal hæmorrhages are well known dangers. If not rapidly fatal a profound degree of anaemia may result from these, thus further reducing the chances of healing.

The tendency to perforation is emphasized in the common term applied to the condition—perforating ulcer. Fortunately in many cases adhesion to surrounding organs, particularly to the pancreas, left lobe of the liver or to the omentum, guards against serious results. This occurs according to Stewart in 50 per cent. of the cases. In other instances a fistulous communication with the duodenum, colon or the cutaneous surface is established or a local peritonitis walling off by adhesions the inflammatory process, may occur with the formation of a subphrenic abscess. A less happy and not uncommon result is the occurrence of a virulent septic peritonitis. These cases are so intense at times as to give rise to a suspicion of irritant poisoning as in a case that came under my observation a few years ago in which death resulted 18 hours after perforation. There was a medico legal inquiry and the autopsy disclosed a pin point perforation at the base of a small ulcer near the pylorus.

The development of a carcinomaouts condition at the base of an old ulcer is of rare occurrence but should be borne in mind. A specimen from a case of Dr. R. Fotheringham's in the collection before you illustrates this termination.

In conclusion I may say that in dealing with the subject no attempt at exhausting the discussion has been made. I have contented myself by trying to place before you some leading features that may assist in the more practical discussion of the medical and surgical aspects of the question.

EMPYEMA—ITS MEDICAL ASPECTS.*

By R. FERGUSON, M.D., London.

THE treatment of empyema is essentially surgical, therefore the medical aspect of the disease is limited to a consideration of its pathogenesis and prophylaxis.

An examination of the conditions which obtain in non-purulent (or primary) effusion is indispensible to an understanding of the pathogenesis of empyema.

The pleura is practically a large lymphatic space, communicating by stomata with a sub-pleural lymphatic plexus. This plexus is intimately interwoven with the arterio-venous capillary plexus. On the costal pleura the lymphatics are found only in the inter-costal spaces, being absent on the surfaces of the ribs (Dybkowsky). The lymphatics are less numerous on the visceral pleura, and are irregularly distributed. It is probable that the absorption of serum is effected throughout the whole pleural surface; but the more solid contents are most probably absorbed by the lymphatics in the intercostal spaces, where the gaping lymphatic mouths

* Read before the Ontario Medical Association.

are most numerous. The respiratory movements of the thorax have a distinct influence upon the absorbing functions of the lymphatics. During expiration, the intercostal spaces become narrow and the soft parts that occupy them are relaxed and projected into ridges towards the pleural cavity. The lymphatic spaces are then obliterated and there is no absorption. During respiration the expansion of the chest causes a widening of the intercostal spaces; the walls of the lymphatics separate, the stomata gape open, and absorption is invited. Hence any conditions that interfere with the alternate contraction and expansion of the thorax and lungs, will impair the absorbing power of the pleural lymphatics. The rapidity of absorption is in direct ratio to the frequency of the respiratory movements.

A basement membrane of connective tissue interspersed with a few elastic fibres, paved with a single layer of endothelial cells, favored by a plexus of vessels, nerves and lymphatics, is, briefly stated, the histology of a serous membrane. This membrane, folded upon itself so as to form a fluid sac, encloses a serous cavity. In health the plasma of the blood, in limited quantity, passes through the walls of the capillaries, undergoing certain changes in its transit, moistens the internal surface of the serous sac, making its exit through the minute openings of the lymphatics, and returns again by way of the thoracic duct to the blood. Normally no serum flows into the cavity beyond that which the lymphatics are able to remove. The inflow from the blood equals the outflow by the lymphatic streams. Such is the physiology of the serous sac.

Under irritation, chemical, bacterial or traumatic, the capillary vessels swell and become hyperaemic, the connective tissue cells proliferate, an increased flow of plasma, leucocytes, fibrin, red blood-cells and bacteria swells the stream which pours into the serous sac. The lymphatics are overtaxed, their power of absorption impaired, and the effusion accumulates. Such is the mechanism of pleural effusion.

Spontaneous cure of non-purulent effusion may be effected by the unaided efforts of nature, resulting in absorption of exuded products and the final adhesion of serous surfaces. The tendency to recovery will depend upon the underlying pathogenic and anatomical conditions, being most favorable in acute plastic pleurisy, less in sero-fibrinous pleurisy, still less in chronic serous pleurisy with hyperplastic walls, and worst in purulent pleurisies.

The advent of suppuration within the pleura implies a radical change in the pleuritic process. In non-purulent pleurisy the inflammatory reaction of the pleural serosa is limited to plastic and serous exudation and new tissue formation. When suppuration supervenes, there is in addition a progressive shedding of the new-formed endothelial elements, which with the migrating leucocytes and other elements of the blood, constitute the pus of the exudate. The transformation from a non-purulent to a purulent effusion is due to the continued irritation of pyogenic organisms and their products.

Bacteriologically purulent pleurisies may be divided into 4 classes: (1) those due to pneumococci, (2) those due to streptococci and staphylococci, (3) those due to the bacilli tuberculosis, (4) those caused by saprogenic organisms. In 9 cases, extending over 11 years in my own practice, 3 were diagnosed tubercular, 3 meta-pneumonic, 2 due to

streptococci infection, and one undetermined. Of course such a limited number of cases is of no statistic value, and is of interest to me merely as coming within my own experience. The 3 tubercular cases were all adults, two of the 3 pneumococcic cases were children, and the two streptococcic cases were adults. The statistics of Netter, Rosenbach, Koplik and others, agree approximately in placing the varieties referred to above, in the following order of frequency; streptococcic empyema about 45 per cent, pneumococcic 30 per cent, tubercular and saprogenic 12½ per cent each. Netter observed that in children 53 per cent of the cases were due to pneumococci, and 18 per cent to streptococci, and that in adults these percentages were reversed. Recent observers are inclined to consider a much larger proportion of cases of tubercular origin than was formerly regarded of that class.

The prognosis will vary with the micro-organism present. The pneumococcic is the most benign. It is the only variety of purulent empyema that may possibly yield to treatment by mere aspiration, especially in children. The empyema due to streptococci invariably requires free pleural incision and drainage. Tubercular empyema is usually a mixed infection. The prognosis here will depend upon the general condition of the patient and the character of the mixed infection.

A bacteriological examination furnishes the most positive diagnosis of the variety of organism present. In the case of tubercular empyema however, a bacteriological examination usually gives negative results. The reason why Koch's bacilli are not often found in the effusion, probably is that this organism operates in living tissues, and is therefore too deeply imbedded in the tissues of the pleural membrane to be cast off with the exudate. The inoculation test of guinea-pigs is the only positive evidence as to whether an exudate is tuberculous. When a bacteriological examination cannot be obtained, the gross appearance of the pus will afford an approximate idea of the nature of the exudate. Pneumococcic pus is odorless, has a greenish tinge, is more puruloid than strictly purulent, does not readily separate into clot and serum, but on standing some time, a thin greenish serum appears on the surface. It is a fibrino-purulent exudation. Streptococcic pus is more yellowish than green in color, thicker and more turbid than the preceding, and on standing readily separates into two layers, the upper clear and abundant, the lower scanty and clotted. It is a sero-purulent pus. Tubercular pus has a watery appearance, resembling that of a cold abcess. This appearance however will be disguised, if as usual, it should be a mixed infection of tubercle bacilli and pyogenic micro-organisms. Suprogenic pus is easily recognized by is odor, as well as its color, viz. a dirty brown.

Prophylaxis. The longer an effusion remains in the pleural cavity, however benign in origin, the greater the danger of microbic contamination and consequent conversion of the fluid into pus. Not only the duration, but the quantity of fluid increases liability to purulent infection. The conditions that govern the amount of the effusion have not been determined. The intensity of the original congestion is not the controlling factor, as "latent pleurisies" *e. g.* are often attended with the largest amount of effusion while acute pleurisies are frequently arrested at the onset of the plastic stage and speedily terminated by cohesion of the opposing pleural surfaces. Large effusions point not only to continued

inflammatory action, but to diminished absorbent power on the part of the pleural serosa, as well as dangerous compression of the adjacent lung. When the effusion rises above the angle of the scapula, and is attended with dyspnoea, I would aspirate even for serous effusion as a prophylaxic against empyema and the formation of adhesoins about the lung in its compressed situation. I am aware of the precautions necessary in aspirating and the dangers which may attend it, but because an operation is not always well done is no reason why it should not be done at all if its employment is indicated. The timely removal of at least a part of the fluid by aspiration (it may not be safe or advisable to remove the whole of it), will relieve the dyspnoea by removing the pressure from the diaphragn and lung, restore the expansion and contraction of the lung, and allow the respiratory movements of the chest to aid the lymphatics in their process of absorption.

I am not an advocate of the use of calomel as an aplastic in the treatment of effusions. I am not sure that calomel prevents or diminshes the formation of fibrin in pleuritic effusion, and even if it does, I do not think such an effect would be desirable. It is by means of fibrinous adhesion of pleuritic surfaces that nature effects a permanent cure. It is only in those cases in which the presence of a microbic agent maintains the effusion of serum and limits the formation of fibrin, that the resources of nature are unable to effect spontaneous absorption of the exuded products and the final adhesion of the opposed serous surfaces. If we imitate nature in her efforts at spontaneous recovery, we should aim at increasing as much as possible the fibrin factor in the exudate.

In Dec. 18, 99, Dr. Chas. H. Lewis of New York, reported a series of experiments which he made with astringent irritants injected into the pleural cavity of animals with a view to increase the fibrinous character of pleuritic effusions. As a result of these experiments, he found that methylene blue, dissolved in freshly aspirated serum and re-injected into the pleural cavity, resulted in the formation of a deposit of fibrin on the pleural surfaces which speedily effects their adhesion and obliteration of the serous cavity. A synopsis of the history of 20 patients treated by him at Columbus Hospital by this method shows absorption and recovery in every case, and without the formation of pus in a single instance, I have had no experience with this treatment but the results attributed to it certainly warrant futher trial and investigation. I believe that any line of treatment that tends to increase the fibrinous element in the effusion operates in the right direction.

Venesection in the treatment of pleuritic effusion has happily been relegated to the past, as it is a procedure faulty in principle, and futile, or rather harmful in results. Depletants such as mercurials and salines, are mischievous rather than helpful in their effects, inasmuch as they may deprive the blood of its fibrinous element and thus tend to retard recovery. Internal medications has thus far given but negative results in the treatment of pleural effusion and proven utterly impotent in the case of empyema. As in any other debilitating disease, supporting and tonic treatment is the only line of internal medication that can be of any service. With the advent of pus, surgical means afford the only rational and radical means of permanent relief—an aspect of the subject which does not fall within the scope of this paper.

MEASURES FOR THE PREVENTION OF CONSUMPTION.*

By PROFESSOR BROUARDEL,
Dean of the Faculty of Medicine of Paris, Member of the Institute.

THE mortality from tuberculosis varies according to the country. In some cases it is accountable for a sixth, a fifth, and sometimes a fourth of the total mortality. Havoc such as this makes it compulsory that all nations and governments should strictly inquire into, and adopt, measures to arrest the propagation of a disease which, in these days, is the greatest enemy of the human race. The wonder is that the voice of alarm has been so long in making itself heard, and that for centuries our ancestors have looked impassively on the disasters going on around them. There were several reasons for this apparent indifference. The struggle was considered useless; the disease incurable; it was not known how it spread. Exaggerating the import of some observations, it was agreed that phthisis is hereditary. They were lulled to sleep by this formula, which served as a pillow for idleness and exempted them from investigating the origin of the mischief.

But when on December 5th,, 1865, Villemin showed experiments at the Academy of Medicine, which proved the real presence of the contagion, when our illustrious colleague, Professor Robert Koch, had discovered and demonstrated to the medical world the agent of this contagion, everyone felt that a new way was opened to humanity, and every nation wished to profit for the public good, by the recent scientific discoveries. Before the scientists I have just mentioned had actually made known their discoveries, the English people had already begun to struggle. Convinced by observation that tuberculosis thrived in dark and damp dwellings, in 1836—nearly seventy years ago—you passed a law providing for the construction of healthy houses, and since that date your zeal has not abated. The grounds for the prevention of tuberculosis are identical in every country. On this question the entire medical profession of the world is united. The Tuberculosis is avoidable and curable. With regard to legislation, it is only possible to bring a law into force that interferes with our daily life, that disturbs inveterate habits, and that has to be carried out in the bosom of the domestic hearth, when it is called for by public opinion: when all are convinced of its benefits, and everyone recognises the danger of his vicious habits, and is ready personally to reform them and to require his neighbour to do the same.

Gradually in all countries the public are beginning to realise that personal care and cleanliness are necessary to obviate contagion, and are also realising that other idea, to my mind equally important, that a consumptive patient is only dangerous if the necessary precautions are not taken around him, and if he himself does not take them to protect his relatives, friends, and fellow-workman from contagion thousands of contagious germs. To expectorate on the ground is a disgusting and danger-

* Address to the British Congress on Tuberculosis, July, 1901.

ous habit. Once this habit has quite disappeared, tuberculosis will decrease rapidly.

What *rôle* does this sputum play in the subsequent propagation of the disease? Collected and shut up in a private, or common but antiseptic, spittoon, destroyed by incineration or some other measure, it is dangerous to no one. Thrown into dry and well-lighted surroundings, exposed to the rays of the sun, it will soon lose its dangerous properties. But if it remains in damp and dark surroundings, it will maintain its activity for a long time. Thus it is that tuberculosis claims more victims from gloomy, ill-ventilated, dark dwellings All nations have recognised this, but England has the double merit of recognising the primary importance of this problem, and of having solved it in a manner peculiarly her own. Recognising that insalubrious dwellings are one of the most potent agents in propagation or tuberculosis, the legislations of the different counties have kept this cause of insalubrity well in view, and have made laws ordering the destruction of unhealthy dwellings.

If tuberculosis germs fall in an ill-lighted, damp houses they maintain their activity for a long time, whether the house is in town or country. In these surroundings population is often very dense. It is no uncommon thing to see one room in Paris occupied by five, six, eight, and sometimes twelve persons. They are continually coming in contact with one another, chances of contagion are increased by this fact alone, and in addition to the limited space has to be added the dirtiness of the occupants, or, as I should say, the impossibility of keeping sufficiently clean. The small tuberculosis foci are created which invade the whole house; the workmen and employés carry the germs of disease into their workshops and offices and soon make a large tuberculosis focus of the town.

The evils of an unhealthy dwelling are not confined to the risk of contagion just referred to. The want of air and light acts on the nutrition of the inmates, children go off, pine away, the strongest men cannot withstand it, every human being living in these places is the destined prey of infectious diseases; and if we only consider phthisis they become predisposing causes of consumption, transforming the strongest man and putting him on a par with the condition of those born of tuberculous parents. In the latter, hereditary is not direct; one is not born tuberculous, but predisposed to tuberculosis. Moreover, unhealthy dwellings are not pleasant to pass the time in, and the workman stays in his home as little as possible, spending the rest of his time in the public-house, and we can add that the public-house is the purveyor of tuberculosis. Alcoholism is, in fact, the most potent factor in propagating tuberculosis. The strongest man, who has once taken to drink, is powerless against it.

Any measures, State or individual, tending to limit the ravages of alcoholism will be our most precious auxiliaries in the crusade against tuberculosis, but the question is too large a one to deal with here.

The dangers surrounding a man in an unhealthy home are the same when for his work, his duties, his pleasure, through illness, or under constraint, he lives all or part of the day in a centre where other people are assembled, where unhealthy conditions and overcrowding exist. If he is well, his companions are dangerous to him; if he is ill, he is danger-

ous to them. Now the conditions of modern life compel a man to live in such centres. As a child there is the school; as an adult, the barracks; a workmen, the workshop; a student, the lecture hall, the libraries, laboratories; the employè or official, the bureau and the offices. If he moves about he uses vehicles, railway carriages. too often contaminated.

At the hotel were he stops he has frequently been preceded by a sick person, and no precautions have been taken to protect the new arrival from possible contagion. If he is poor and ill he goes into a hospital, where he is surrounded by contamination on every hand. This peril from common life, inseparable from advance in civilisation, is continually growing: it is the ransom, and accounts for the threatening increase in tuberculosis.

Before touching on the question of the cure of tuberculosis I should like to say a few words about measures adopted to prevent tuberculous contagion by food. Since Chauveau showed that it was possible for tuberculous germs in food to produce tubercles in the intestinal *tract*, attention has been turned to precautions for preventing the consumption of *meat* and *milk* from tuberculous animals. As far as meat is concerned, surveillance of the slaughter-houses in large towns achieve this. In Belgium this measure is also made to apply to the country; but I do not know of any other kingdom where private slaughter houses are inspected, and in them it is that phthisical cows, measly pigs, and diseased animals of any kind are slaughtered, and are able to escape inspection. This injurious food is consumed either as fresh meat, or in the form of pâtés or sausages from which the tuberculous viscera have not been removed. Another danger is the hawking of meat in pieces. It is rife especially in the large towns. Butchers receive daily quarters of meat despatched by provincial butchers This meat escapes inspection. With no wish to exaggerate the danger of the propagation of tuberculosis by meat, it cannot be overlooked. It is easy, by means of legislation, to protect the population from this method of contamination. Belgium has set us the example. That the milk of cows with tuberculous inflammation of udders is used is very clear.

It is well to add that in large concerns the milk from different sources is mixed, and one cow only need be the victim of tuberculous mammitis in order to contaminate all the milk with which its milk is mixed. To prevent this method of propagation, strict inspection measures should be adopted, such as have been in use for several years in Denmark, Sweden, and Norway, to the great advantage of public health. Until such necessary measures are actually adopted there only remains the simple mode of avoiding risk from milk by boiling it, and this should be widely made known, in spite of a too widespread prejudice, which wrongly holds that boiled milk is less nutritious and indigestable. If a man is the victim of tuberculosis everything possible should be done to cure him, for *he can be cured*. The idea that tuberculosis can be cured dates back to Hippocrates: "Phthisis if treated early enough, gets well," said the Father of Medicine.

At the Morgue, in Paris, where I frequently make post mortems on accidental deaths, I can state that in half the cases, if the person on

whom the post-mortem is made has lived in Paris for about ten years, I find healed tuberculous lesions, either in the form of cretaceous transformation or fibrous cicatrisation. These lesions, moreover, in the majority of cases, are not phthisis in an early stage manifested by small disseminated foci; they are cicatrices of large foci, sometimes of wide completely cicatrised cavities. Phthisis therefore is curable, even in its most advanced stages. As a tuberculous patient *can* be cured, everything possible must be done to bring this about by careful organization. The doctor being himself firmly convinced that his patient can be cured will make the necessary modifications in his way of looking at the disease.

The doctor shall tell the patient and his family at once that he has a serious disease, but that it is curable.

And so as to the methods of treatment. In this address I am only dealing with the disease, as it effects working men and employés.

The remedies to be recommended vary according to the stage to which the disease has got, and also if the patient is single, married, or father of a family.

Three distinct periods may be defined. In the earliest the patient coughs and has a cold, and it is the stage of the disease which interests us most, when intervention is of use

In what way can we be of use to a patient in the first stage? In Germany there are polyclinics for tuberculous in the large towns, where a doctor, provided with the things necessary, attends to the patients who come to consult him, either throughout their illness, or till the patient can be admitted into a santorium. A committee, composed of benevolent men, and women large numbers, looks after the patient at home, tells his wife what to do, sees that his home is kept clean, and looks after necessary prophylactic measures. As far as possible, the misery consequent on the breadwinner being out of work is relieved from a bank, kept up like the sanatoria banks to assist such cases. Mons. Calmette conceived the same idea, but he went farther, and advised that instead of waiting for the workman to come for advice, they should go and meet him by inviting him to come to a dispensary, run on the same lines as the German polyclinics.

As far as I can see, the best way to ferret out disease would be to have one or more agent-workmen, formen-werkmen if it were possible. They are the ones to notice when their comrades cough; they could advise them to go to the dispensary. Alive to the dangers of a badly kept workshop or yard, they superintend its being kept clean and in order; they actually carry out anti-tuberculous education. Those who visit the dispensary receive the necessary attention from the doctors, and are told the danger of dissemination by sputum, alcoholism, &c. They are looked after, they get meat gravy—one or two meals, as far as funds will allow. Their families are helped and their home is kept an eye on from the hygieme point of view; as far as possible, the misery by which the poor man is threatened is kept away from him. Among these patients some are found who must be sent to a sanatorium. If the patient is an unmarried man, and if he can be sent to a sanatorium, his chances of recovery are very great; but for a married man to go means that his wife

and family must be provided for during his absence, and his mind relieved of all anxiety on their account.

Relief banks for assisting the families of the inmates are most necessary to sanatoria. And in many cases sanatoria are essential to complete the work begun at the dispensary.

All nations have obeyed the same generous impulses, and the time will come when, instead of the poor tuberculous patient being given up to his sad lot, he will find that if he is only in the first stages of the disease, that by means of disp ensaries and sanatoria there is always hope and often realisation of his recovery. If the patient is beyond the first two stages when he asks for admission to the hospital, it must not be overlooked that he may still be cured, provided he can be made see things as they are. He may be isolated, in order that he may not be discouraged by the spectacle of his comrades' sufferings.

I have been asked to consider the question from the international point of view. I do not think that it is possble to deal with consumption in this respect as plague, cholera, and yellow fever have been dealt with in order to prevent their being brought into a country. I do not know how any doctor can state positively that a traveller at the frontier or the port is not consumptive. But it would be possible to take international steps in another way. Railway carriages might be disinfected, as well as steamboats and hotels, and the traveller no longer exposed to germs of contagion. That would be of truly international import. In several countries, particularly in the United States, hotel keepers who receive a consumptive client have to notify it to the municipal authorities, and compulsory disinfection of the room has to be gone through. The Minister of the Interior in Germany has brought in even more stringent measures. Every doctor who attends a case of pulmonary or laryngeal tuberculosis is bound to report it in writing to the police as soon as he has made his diagnosis. After death from tuberculosis the room in which the patient has died has to be disinfected as well as his belongings. Hotel proprietors, "furnished house" keepers, asylums, and other public institutions are compelled to notify at once every case of tuberculous disease which arises in their establishment. Notification, disinfection, salubrity of hotels, carriages, and steamboats, are questions of an international character, which might be advantageously dealt with by representatives of the different nations.

The lesson to be drawn from the efforts that have been made by all nations to carry out a crusade against tuberculosis is that in conversation, in the public prints, and in specially prepared pamphlets, we should make it universally known that tuberculous contamination can be avoided, and that in addition the disease can be cured.—*The Medical Press and Circular.*

THE TOXIC ORIGIN OF NEURASTHENIA AND MELANCHOLIA.*

By M. ALLAN STARR.

FIRST diet: This cannot be laid down in a uniform manner for all patients. The majority of them do not digest milk well, and eggs as a rule do not agree with them, though occasionally raw eggs will be digested when cooked eggs will not. Meat of all kindsseems to agree very well with this type of patient, but meat soups are not well digested, and therefore cream soups are preferable. Fish in all forms and oysters usually agree with such patients, and also certain types of vegetables; but potatoes, turnips, beets and tomatoes are liable to give more trouble than other vegetables. Rice, macaroni, and hominy are usually well borne, but should not be cooked with cheese, and cheese as a rule is not well digested. Patients differ entirely from each other in their capability to assimilate breads and sweets, and it will not do to lay down any rule for the use of these articles; in fact, in these cases various forms of diet should be tried until the articles which disagree are ascertained

Fluids: Tea almost uniformly disagrees with these patients, making them nervous and increasing their indigestion. In many of the patients coffee acts as a desirable and pleasant stimulant, both in the morning for breakfast and after dinner, and does not in any way interfere with sleep. In others it acts as a poison and should be excluded. It is believed that in all these cases alcohol should be avoided in every form, especially the sour wines and champagne. In about one-half of the cases whiskey can be taken without ill effects, but the stronger wines, like port and sherry, and all liquors are to be avoided. Occasionally a patient can take Rhine wine diluted, or the Australian Vöslauer, without ill effects. Water should be taken very freely, and a good alkaline or lithia water is often of much benefit.

Drugs: The digestion must be aided in these patients by two classes of remedies—one which stimulates the liver to activity, the other which counteracts the evolution of toxic agents in the intestines. First, these patients are given small doses of calomel (one-tenth grain every half-hour till one grain is taken) every ten days, and a dose of podophyllin (one-fourth grain) every ten days alternately with the calomel. It is also well to stimulate the liver by the use daily in the morning of either Carlsbad salt or a salt made by mixing ten grains of salicylate of sodium with one drachm of phosphate of sodium and half a drachm of chloride of sodium. If this mixed salt is put in a large tumbler of sparkling water of any kind, and taken during the act of dressing in the morning, it will usually be beneficial.

The second object—the counteracting of the toxic agent—is attained by one of three different remedies, and it is never possible to determine exactly which of these three in any one case will prove of service. The

* The Medical Record.

first is a combination of five grains of the sulphocarbolate of sodium with one grain of permanganate of potassium, put up in a capsule which is coated with shellac so as to be insoluble in the stomach, and hence dissolve only in the intestine. Such capsules are given after each meal and on retiring. The second remedy that is used is a capsule of salol and castor oil—five grains of salol and ten minims of castor oil. This also is rendered insoluble in the stomach by a coating of shellac. The third remedy is given in the same manner in capsule after eating, and consists of benzoate of sodium two grains, sulphocarbolate of zinc one grain, and betanapthol one grain. It has been noted that by the administration of these remedies continuously for a considerable period a steady amelioration in the symptoms of intestinal indigestion will ensue, and, what is much more noticeable, an entire cessation in the periodicity of the alterations of the symptoms; the first evidence of relief being a quieter rest during the night, without any early awakening, and a relief from the depression that occurs early in the morning.

Baths: The use of a hot bath on rising, at a temperature of 104° F. for three minutes, followed by cool sponging for one-quarter of a minute, is of importance, as nothing stimulates the general nutrition of the body better than such a measure; but in this type of patient the cold bath in the morning usually produces distress, and is followed by a feeling of exhaustion, cold extremities, and discomfort.

Exercise and rest: In all cases an increased amount of exercise should be insisted upon, yet in many instances any long-continued exercise is most exhausting and is followed by a rapid action of the heart: hence it is far better for these patients to swing clubs briskly or to play a game of tennis for twenty minutes, thus getting into a pleasant perspiration, than it is to take an hour's horseback exercise or to play a game of golf which requires tramping two miles, though both of these measures occasionally can be endured and are beneficial. One very important element in the treatment is regularity in the amount of rest. These patients should be urged to lie down and relax all the muscles, the clothing being properly loosened, for one-half hour after each meal, and after any active exercise rest of the same duration should be enforced. One of the essential elements of successful treatment in these patients is a pleasant occupation for the mind, as their depression leads them to intensify their nervousness by introspection and self-observation. A variety of occupation should be sought, and every means should be employed to keep them interested and diverted. An outdoor life is far better for them than a life indoors, and therefore if an occupation can be found which involves some activity in the open air it is desirable: the study of botany, the study of forestry, the running of a farm, the care of chickens, the occupation of an engineer or surveyor, the study of landscape gardening—all of these are pleasing occupations for men and women, and it is on this principle that travel and change of scene may be urged upon these patients. But whatever means are employed in their treatment, it seems that the essential element in their success is the counteracting of the toxic product within the body and the prevention of its formation.

Symptoms.—In eczema about the finger-nails W. Dubreuilh and D. Freche state the matrix or the bed of the nail may be affected, primarily, or by contiquity from eczema on the back of the finger. The first sign is the redness of the supra-ungual tissue, which becomes painful to pressure. Rarely so much serum may exude that the nail is lifted up, and finally falls off. Striations are noted in the nails, with punctiform depressions. The whole nail may be raised from its bed or a depression may appear in the median line. If the eczema is chronic, the nails will be deformed.

Treatment.—W. R. Ingle Dalton says that treatment of eczema must consist in taking into consideration the general underlying conditions. Those patients suffering from chlorosis, or anæmic subjects, should have tonics, such as phosphorus, iron, strychnine, and mineral acids. Above all a dietary should be strictly enforced: Meat, if allowed at all, only once a day. No oatmeal, no strawberries, no sugar, not even in coffee or tea. This dietary is to be adhered to for several weeks. Water, in large quantities, should be drunk every day. Gottleib favors a milk diet for some time. The alimentary canal should be kept as antiseptic as possible by means of the administration of naphthalin, charcoal, and ipecac. Lately ichthyol, combined with arsenic, has been personally used, in the so-called strumous diathesis, as follows:—

℞ Ammon-sulph-ichthyolat., 3 drs.
Acidi arsenosi, 4 grains.
Glycyrrhizæ, q. s., et ft pil. No. 180.
M. Sig: One or two after each meal.

Those cases where the surfaces are excessively influenced by inflammation (vesicular forms) should be treated by removing all causes of it. Water, for bathing purposes, in all eczemas, should be prohibited, as far as possible, unless rendered alkaline. A good lotion for the bath is bicarbonate of soda, 1 part, to 50 of water. All irritants,—thermic, chemical, or mechanical,—scratching with fingers. the secretions from sweat, the use of soaps, etc., should be attended to first. If there are scales or crusts, an oleaginous application, such as olive-oil, after hot water and lotion of green soap, may be used. If the eczema is caused by parasites, or is of the form called by Unna eczema seborrhœicum. a germicide is demanded, such as kerosene oil, salicylic acid, or sulphur ointment. A 5-per-cent: ointment of chrysarobin and pyrogallol, or ichthyol or tar preparations, in the squamous varieties, if there is not much secretion, ought to be exhibited. Finally, those etiological factors, springing from neurotic conditions,—anæmia, leucocythæmia, constipation, etc.—or whether the cause be local or external, internal or general, should be completely regulated, and appropriate remedies prescribed.

In the treatment of eczema Gaucher says constitutional treatment will be necessary in both the acute and chronic forms. Lithæmic,

nephritic, and dyspeptic individuals should take especial care of their skin, and they should observe a strict diet, without ferments, extractives, (fish, game, cheese, or bouillon), acids or alcohol in any form. They should take milk, eggs, green vegetables, little meat,—boiled or roasted,—and fruit. Benzonaphthol can be given as an antiseptic, and laxatives should frequently be employed. Constitutional treatment of eczema is with the alkalies with feeble purgative properties, cod-liver-oil, iodides, arsenic, etc. The local treatment consists of water, with perhaps a little boric acid or picric acid in acute cases. A dusting-powder is often beneficial. When the eczema becomes chronic, alkaline baths, tar, lead or tannin ointment, ammoniated mercury, salicylic acid, nitrate of silver, etc., may be used. For chronic eczema of the scalp, the hair must first be removed, then boric or tar ointment applied under a rubber cap. When eczema occurs in the nostrils, behind the ears, etc., boric or calomel ointment is to be used, and, for eczema of the lips, wet compresses followed by oxide of zinc. Tar, mercury, and salicylic acid will prove useful in old chronic cases.

According to S. C. Martin, food adapted to the capacity of the digestive organs, and the demands of the system is of paramount importance in the treatment of eczema In cases of constipation a tablet composed of aloin, $\frac{1}{4}$ grain; strychnine sulphate 1/60 grain; extract of cascara sagrada, 2 grains; extract of belladonna, $\frac{1}{8}$ grain, given once or twice daily, will usually, when used in diminishing numbers, enable the bowels to regain their normal tone.

Alkaline diuretics are always included. The acetate of potash combined with sweet spirit of nitre has long been a favorite adjunct to the treatment of eczema, but effervescing lithium and potassium carbonates are preferred. This preparation is preferable to any other alkali.

In plethoric cases, attended by constipation, instead of using the tablets already mentioned, saline laxatives are preferred. Epsom salts and cream of tartar answer a very good purpose. After the acute stage is past one should add to each dose of the saline solution about 4 or 5 drops of Fowler's solution of arsenic and give it after meals three times a day.

In non-plethoric cases the above-mentioned tablets are given to relieve constipation, and a tablet composed of arsenic, 1/50 grain; strychnine, 1/50 grain, and iron by hydrogen, 2 grains, is given three times a day, after meals.

In the acute stage, with excessive heat and inflammatory action, sedative lotions or soothing astringent ointments are indicated. A useful ointment contains the following ingredients: Zinc oxide, $1\frac{1}{2}$ drachms; carbolic acid, 5 drops; salicylic acid, 5 grains; vaselin, 1 ounce. In chronic cases, with infiltrated and thickened skin, tar ointments or scrubbing with green soap and warm water, and even scarification of the lesion may be indicated.

Malcolm Morris says that there are two special forms of eczema which occur at the change of life,—and the commonest, that which comes most before practitioners, is acute eczema of the head and face. There is usually considerable flushing, sweating or other nervous phenomena,

headaches, and disturbances of the digestive tract: dyspepsia and constipation. A spare woman at that time of life suddenly begins to flush in the face, perhaps after taking a meal; later the disorder becomes a little more acute; she gets an acute eczema of the scalp, and it spreads down all over her face. For that condition there is no drug or combination of drugs which is of such service to relieve the symptoms, not only the eczema, but all the symptoms mentioned, as ichthyol. It can be given in tabloids covered with keratin, which does not dissolve until it gets into the intestine. The doses should be 2½ grains, to begin with, after each meal. At the end of two or three days it should be increased to 5 grains, then to 7½ grains, and then to 10 grains. If the patient tastes it much, the dose should be cut down a little.

With regard to local treatment, this form of eczema which occurs at the change of life requires rather more active treatment than is needed at any other time. Such cases usually bear fairly strong applications of sulphur and resorcin.

The other form at change of life is the very acute eczema which occurs about the vulva and anus.

R. Ledermann considers arsenic useful in chronic eczema. It is best given by the mouth in doses of 1/40 grain of acidi arsenosi. Iodothyrin and thyroid-gland tabloids are extremely valuable in some of the eczemata. Oöphorin is useful in climateric eczema. The internal treatment of acute eczema is very unsatisfactory. Locally, the best results are usually obtained by the free application of dusting-powders, during the erythematous and early papular stages. These are zinc, bismuth boro-tannate of aluminium, and dermatol. For itching, a lotion of thymol (1 in 400), acidi carbolici (1 in 50), and menthol spirit (1 in 50 to 1 in 100) may be used under the powder, care, however, being taken not to apply it to the face or scrotum. In the papulo-vesicular stages ordinary earth-clay, with from 1 to 2 per cent. of acetic acid, 1 per cent. of resorcin, or 1 per cent. of thymol, is one of the best applications. Lassar's paste, tumenol paste, and thiol or ichthyol paste are also valuable. When the crusts form acidi salicylici, in a vehicle of olive-oil, is useful, and an especially good formula is: Zinci oxidi, 1 part; bismuthi subnitratis, 1 part; unguenti lenient., 4 parts; unguenti simplicis, 4 parts. The squamous forms, with their almost absent peeling processes, are to be treated by the tar preparations. In chronic eczema the internal treatment resolves itself into that of the diathesis, and the exhibition of arsenic or ergotin. The tar preparations are also to be used in chronic eczema.

H. Sagebiel has used naphthalan in cases of eczema. Of 5 patients suffering from chronic eczema, excellent results were obtained in 4, and distinctly bad results in 1. In 35 other cases with acute eczema, the results were satisfactory in 32 and unfavorable in 3. Naphthalan has the consistency of a salve, and is applied directly without previous preparation of the surface, such as the removal of crusts, etc. A bandage is then applied and changed once in twenty-four hours, when the applications of the drug are renewed. In all the favorable cases desquamation occurred quickly, and without reaction, and a complete cure was obtained in an interval of from two days to three weeks.

In the treatment of peri-ungual eczema W. Dubreuilh and D. Freche use boric-acid or salicylic-acid washes and a dusting-powder. Resorcin may give good results in chronic inflammation.

In eczema Winternitz successfully employed red solar light. the diseased areas of skin being first covered over with a thin silk material of an intensely red color. Exposure to strong sunlight was then made for variable lengths of time in one case this amounting to as much as four hours. In all the cases thus treated a considerable improvement and in some a complete cure took place.—*Sajous' Monthly Cyclopaedia.*

THE CURE OF CORNS ON THE SOLE OF THE FOOT.

If the patient will give the toes free play by adopting boots and socks having a straight inside line, avoid the conventional eversion of the foot, and acquire the habit of pressing the toes against the ground in every step, the callossities will disappear. They are due to defective function of the toes. Removal may, of course, be hastened by the use of solvents, such as a mixture of salicylic acid and collodion.

Another correspondent writes that he has found that corns on the sole of the foot rarely resist the following treatment: A piece of salicylic and creasote plaster, muslin, as suggested by Unna, is cut rather larger than the corn, and applied to it. This is removed each or every alternate day. As much of the corn as is then removable is ground off with pumice stone, and another piece of the plaster muslin applied, and so on, until the part is normal. He uses the muslin plaster containing acid salicylic twenty per cent., creasote forty per cent., and has found that it is more comfortable to wear if it is "backed" with one or two thicknesses of ordinary plaster. Of course a properly fitting boot with a sufficiently thick sole, is a *sine qua non.*

Still another writer suggests that the best relief he found was to take a piece of moderately thick leather, circular, about two inches in diameter, and cut a small hole—size of the corn—in the middle. There is no need of fastening the leather to the foot; he found it retained its position on fixing it in place after putting on his sock.

Finally. the following treatment is suggested. Soak a piece of lint or cotton-wool the size of the corn with acetic acid (forming in fact a compress), to be well covered with a piece of gutta-percha sheeting; bandage lightly. Do this for three consecutive nights.—*Brit. Med. Journal.*

GOING TO BED HUNGRY.—This is a relic of the misconception of the laws of hygiene following physiological investigations in the early part of the last century. Man is the only animal who was ever foolish enough to voluntarily go to sleep while hungry. Judging from the advice now given by thinking physicians, the practice will soon become a mere tradition.—*Diet and Hygienic Gazette.*

CHLOROSIS.

SAYS *The London Hospital:* The point of view from which many of the phenomena of chlorosis are regarded has altered considerably during recent years, so that now again, as in that long ago when by giving the disorder such names as *febris amatoria, icterus amantium*, and so forth, physicians expressed their belief in its sexual origin, the tendeney is to regard the disorder as associated in some way with the function of reproduction, perhaps, in fact, as but an exaggeration of certain changes which normally occur in woman preparatory to her great function of child-bearing. Time was when attention was principally fixed upon the changes in this blood in disease. Poverty of blood was looked upon as the central fact to be regarded. Anemia and debility being considered as almost of necessity coincident, and chlorosis being evidently a condition of anemia, every effort was made to "build up" new blood.

Perhaps the microscope was responsible. At any rate, we can have no doubt that by depending too much upon the counting of blood corpuscles both in diagnosis and in estimating progress physicians have for many years past hovered on the verge of error.

Of late, however, with more accurate clinical methods at our disposal, doubt has been thrown upon much that was not so long ago considered certain. Speaking at a recent meeting of the British Balneological and Climatological Association Professor Clifford Allbutt pointed out that some of the tests on which we have relied can no longer be trusted. "For many years," he says, "we, or our clinical clerks for us, have been industriously engaged in making blood counts. Now, of the value of blood counts in the more eccentric deviations of the blood from the standard of health, I am at present not called upon to speak: we leave such perversions out of account. But even if we regard for the moment the red corpuscles only, as in chlorosis, for instance, the value of blood counts, if not depreciated beyond all usefulness, proves to be far less directly interpretive than we had supposed." He goes on to show that a drop of blood taken in the usual way is not by any means representative of the mass of the blood in the body, varying as it does according to the conditions of the cutaneous circulation, according to the exercise taken or of mental work done, according to the time in relation to sleep, and in other ways.

Not only do we thus have it that the blood counts, on which so much has been made to hinge, are useless or misleading, but by new methods of research, new factors are being introduced into the problem. More especially do we now have to consider the total quantity of blood present in the body. We are now told that the impoverished condition of the blood in chlorosis, which to some observers has appeared to be the main departure from health and sufficient to account for all the symptoms of the disease, is after all only apparent, that there are corpuscles enough and hemoglobin enough, only that they are scattered through far to large a quantity of plasma—plasma which, useful as it may be for purposes of

nutrition, is obviously of but small service in carrying oxygen to the tissues and in thus maintaining the functional activity of the body.

Taking this more recent view of chlorosis it would appear that the dyspnea, the palpitation, and the not infrequent dilatation of the heart in chlorosis are to be explained, not by lack of blood, but by the fact that in this disease the bulk of the blood is increased without proportionate increase in the corpuscular element. Thus the therapeutical problem is not so much how to multiply the red corpuscles as how to diminish the plasma in which they are extended. "Pull the blood together and there will be corpuscles enough, the heart will not have to deliver excessive parcels of blood to the lungs and elsewhere, and its dilatation will recede in so far as it may have been due, not to malnutrition, but to need of greater temporary capacity." On this hypothesis many of the symptoms of chlorosis appear easy of explanation, and the somewhat mixed ideas which have long prevailed as to the therapeutics seem to receive some degree of clarification. We cannot admit, however, that we are any nearer the prime cause and origin of the disease. Probably the old physicians were right, and certainly a number of modern physicians are inclined to agree with them in thinking that sexuality has much to do with the matter, that this excessively rich blood plasma is in a sense a preparation for maternity, and that many of the symptoms which accompany the condition are but the organic expression of that deeply-rooted desire for maternity which, however little it may be shown, or even felt, so far as the ordinary consciousness is concerned, is the motive power in the life of normal women. This raises at once the ticklish question of marriage as a cure for chlorosis, about which we will only say that "it is a wasteful thing to use a steam hammer to crack nuts. Still, the nuts do generally crack."—*The Dietetic and Hygienic Gazette.*

THE USE OF HEAT AS A MEANS OF DIAGNOSING THE PRESENCE OF PUS.

According to Dr. K. Lewin, of Berlin, the application of heat, while relieving pain resulting from simple acute inflammation, is found to have exactly the contrary effect when suppuration is present. Dr. Lewin has applied this observation to the solution of the question of the presence of pus in cases of appendicitis. In ten persons attacked by appendicitis where Dr. Lewin applied hot compresses for one or two hours, eight were greatly relieved, while two found their pains increased. In all the former group a spontaneous cure resulted in the course of two or three weeks, while in the others, after persistent trial of medical treatment without result, operative interference became necessary, and pus was found in both instances. The author considers that in applying the test it is important to use no other calmative means, and to keep from the patient its meaning, that the effect of the application may not be modified by any dread of an operation.—*British Medical Journal.* Jan. 26, 1901.

THE USES OF PHENOL IN DERMATOLOGY.

BY JAY F. SCHAMBERG, A.B., M.D.,
Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine.

PHENOL, phenic acid, carbolic acid, or phenylic alcohol, as it is variously designated, has been used locally and internally for many years in the treatment of diseases of the skin. Its value as a topical medicament has so far eclipsed its reputation as a constitutional remedy that many physicians are doubtless unaware that it has any internal uses in dermatology. Nevertheless, many careful observers have testified to its efficacy when administered in appropriate cases. In the treatment of *psoriasis* it appears to have earned a more permanent place in dermatological therapeusis than in any other affection. Kaposi says of it: "In carbolic acid we possess an excellent tar preparation which, administered in the form of pills, is well borne and acts analogously with arsenic. One prescribes

℞ Acidi carbolici ..... gr. cl.
Ft. pil. No. 100. S.: 5 to 10 pills daily.

One can continue the medicament for weeks even in larger dosage, although I hold this unnecessary. With the exception of mild irritation of the kidneys I have never seen the slighest harm from its use." McCall Anderson says carbolic acid is especially useful in chronic psoriasis where the patches are not much infiltrated. It may be given in three-to ten-grain doses daily in the following formula:

℞ Acidi carbolici ..... ʒ iij;
Glycerini ..... f ʒ j;
Aquæ destillat..... f ʒ v.
S.: One drachm in a large wineglass of water before meals.

Carbolic acid has also been advised in the treatment of *pruritus*. I have recently had the opportunity of studying its effects in several cases of generalized itching which had lasted over a period of months. In all or these cases there was improvement, amounting in one or two patients to a practical cure. The drug was given in one-to four-grain doses in sherry wine.

℞ Acidi carbolici .... ℥ xxiv to lxxij:
Glycerini ..... f ʒ j to f ʒ ij;
Vini Xerici ..... q. s. ad f ʒ iij.
S.: One dracham in water after meals.

In this form phenol is not at all unpalatable and agrees well with the stomach. In one patient the appetite was distinctly improved by its use. No renal irritation was observed.

When carbolic acid is given internally it is said to circulate in the blood as an alkaline carbolate, and is eliminated in the urine as a sulphocarbolate. In what manner it acts in pruritus is difficult to state with any degree of positiveness. The drug acts as an anti-fermentative in the stomach and bowel, and also acts as a valuable intestinal antiseptic

Cases of pruritus due to intestinal autointoxication might readily be improved by the use of phenol. It is known that phenol is eliminated through the sweat glands, probably as carbolates. The contact of the drug with the skin may exert in this manner a certain antipruritic effect. I am told by a friend that carbolic acid internally is an excellent deodorant in malodorous sweating.

The drug appears to be quite safe in reasonable doses. Bell reports its use in the treatment of the plague; in a case ending in recovery he gave twelve grains every three hours until 250 grains had been administered.

The *local uses* of phenol, however, have given the drug its chief reputation. According to the strength in which it is employed, it acts as a sedative, a stimulant, or an escharotic. It is, moreover, a valuable antiseptic, and above all an antipruritic. Its action in benumbing the peripheral nerves of the skin makes it one of the most valuable of all applications for the relief of itching. It has been styled the "morphine of the skin." Carbolic acid has therefore been extensively employed in all dermatoses accompanied by pruritic manifestations. It has found an eminent field of usefulness in *eczema*, in which disease there is as a rule such distressing itching. In acute erythematous or papular eczema, the following lotion will be found most grateful:

℞ Acidi carbolici ..... gr. xxx;
Acidi borici..... ʒ j;
Glycerini..... f ʒ j;
Zinci oxidi ..... ʒ ij;
Aquæ ..... q. s. ad f ʒ vj.

In more chronic cases it may be employed in greater strength. Hebra advises in chronic scaly eczema of the face:

℞ Acidi carbolici..... ʒ ij;
Glycerini .....
Ætheris ... . ää ʒ j;
Spts. vini rect ..... f ʒ vj.

This preparation must, however, be used with care.

In subacute vesicular eczema and in eczema rubrum I have obtained most excellent results from a phenol-calomel paste of the following composition:

℞ Acidi carbolici ..... gr. x;
Hydrarg. chlor. mit..... gr. xx;
Pulv. amyli .....
Pulv. zinci oxidi ..... ää ʒ ij;
Petrolati..... ʒ ss.

This ointment is a safe and generally useful application in all except the very acute eczemas. In other cases of subacute eczema carbolic acid may be incorporated in a modified diachylon ointment:

℞ Acidi carbolici ..... gr. x;
Plumbi oxidi..... (c. p.), ʒ j;
Petrolati.....
Lanolini..... ää ʒ ss

A cooling and antipruritic ointment of great efficacy, useful in erythematous, papular, and squamous eczema, and in lichen planus, pruritis, etc., is made up as follows:

℞ Menthol ..... gr. v-x;
Acidi carbolici ..... gr. x-xx;
Ung. acquæ rosæ ..... ʒ j.

This produces primarily a mild burning sensation followed by a distinctly refrigerating effect. When other ointments fail to relieve itching, this often acts in the most gratifying manner.

In chronic papular eczemas accompanied by infiltration, and in lichen planus, a stimulating ointment suggested by Unna may be employed:

℞ Hydrarg. chlor. corrosiv ..... gr. ij;
Acidi carbolici ..... gr. xx;
Ung. zinci oxidi ..... ʒ j.

In *pruritis* and *urticaria*, carbolic acid in the form of a lotion is a remedy always to be relied upon to give at least a considerable measure of relief. The addition of alcohol to the lotion increases its antipruritic efficiency. Sopped on the skin as often as is required, it constitutes a cleanly and agreeable mode of treatment.

℞ Acidi carbolici ..... ʒ j-ʒ ij;
Glycerini ..... f ʒ j;
Spts. vini rect .....
Aquæ ..... ää f ʒ iij.

In obstinate cases, menthol, camphor, chloral, or tincture of mineral tar (liq. carbonis detergens) may be added.

Alopecia Areata.—There is at present considerable divergence of opinion concerning the origin and character of alopecia areata. The French school strongly champions the microbic theory which holds microorganisms as the sole cause of the disease. Certain other dermatologists regard the affection as purely trophoneurotic in nature. The truth may perhaps be found in an intermediate position. At any rate, whether germs or nerve innervation be invoked as a cause, we possess in carbolic acid a remedy which fulfils two important therapeutic indications, stimulation and sterilization. Duhring advises the following lotion:

℞ Acidi carbolici ..... f ʒ j;
Alcoholis ..... f ʒ j-f ʒ vj;
Olei ricini ..... f ʒ ij;
Olei amyg. amar ..... gtt. x.

I have for some time been employing in alopecia a liquid consisting of:

℞ Acidi carbolici .....
Alcoholis ..... ää f ʒ ss.

This is painted upon the patches with a cotton swab once or twice a week. In the intermin milder stimulating and antiseptic agents are used. The application produces a burning sensation, and leaves, upon drying, a whitened skin which later becomes considerably reddened. In three or four days a mild scaling is seen. This application does not act as an escharotic, but as an intense stimulant. The alcoholic character of the solution enables it to penetrate into the mouths of the hair follicles and thoroughly sterilize them. The results of this method of treatment are extremely gratifying.

Crocker says of the application of pure carbolic acid in alopecia areata: "I can bear by the statement that carbolic acid applied to a match stick with cotton acts only as a superficial escharotic. The skin is immediately whitened and the epidermis peels off in a few days, but no sore or deep destruction ensues."

Parasitic Diseases.—The phenol-alcohol solution just referred to is of considerable value also in the treatment of ringworm of the scalp. Carbolic acid in lotion or ointment form is useful in the treatment of many parasitic diseases, such as impetigo contagiosa, ringworm of the skin, beard, or scalp, tinea favosa, tinea versicolor, and in the various animal parasitic affections.

Furuncles.—Boils may at times be aborted by cauterizing the center of each lesion with pure carbolic acid upon a probe or toothpick.

Carbuncles.—Manley and others have claimed excellent results from the early injection of pure carbolic acid into carbuncles. In the early stage, before extensive infiltration has occurred, the injection of about three minims will suffice; later considerably more acid must be used, it being injected into each of the necrotic foci of the carbuncular infiltration. When used early, it is said that "the relief is so prompt and the destruction of infective spread so decisive, that the suffering patient again enjoys his unbroken sleep and recovers his appetite."

In conclusion it may be well to call attention to certain dangers which may attend the too free use of carbolic acid upon the skin. In ointment form the drug should not be applied over too extensive an area of the body surface for fear of toxic absorption. The danger is increased if the skin be denuded of epidermis. Lotions applied to an abraded integument are also not entirely devoid of risk. Again, a number of cases of gangrene have been reported from the application of carbolic acid to the skin in the form of continuous moist dressings. Such dressings should therefore be avoided.—*Therapeutic Gazette.*

ON CERTAIN PRACTICAL APPLICATIONS OF EXTRACT OF SUPRARENAL MEDULLA.

As a result of numerous experiments in the physiological laboratory of the University of Edinburgh, the author suggests that a trial should be made of this extract in all cases in which it is desired to strengthen or induce uterine contraction, as it has a far greater power in causing contraction of the muscular tissue of the uterus, whether pregnant or non-pregnant, than any other drug, and this whether it be applied directly or introduced through the circulation. It may be given by the mouth, but in post partum cases it might be injected directly into the uterine cavity. The solution suggested is thirty grains of dry medullary substance to a pint of water, sterilized by boiling and injected fairly hot; the value may be increased by the addition of a drachm of calcium chloride. In another class of cases it may be of great value, viz., in sudden cardiac failure, whether the result of shock, hæmorrhage, or an overdose of anæsthetics.—Professor E. H. Schäfer, F. R. S. (*British Medical Journal*, April, 1901).

UROTROPIN AS A URINARY ANTISEPTIC.

THE London *Lancet* of January 19, 1901, contains an article by CAMMIDGE, in which he details the results of a series of experiments with this drug. The results of his chemical experiments are summarized as follows: (1) Urotropin may alone, by prolonged heating, be made to yield formaldehyde, but this decomposition does not take place at body temperature. (2) An alkaline solution of urotropin may be similarly decomposed, but the body temperature is not sufficient to cause the change. (3) Dilute acids quickly, decompose urotropin on boiling with the evolution of free formaldehyde, and this change occurs to a less degree at 37° C. (4) Acid salts—*e.g.*, of the urine—liberate formaldehyde from urotropin on boiling, but not at 37° C. The acid urine of a person taking thirty grains of urotropin a day does not contain free formaldehyde.

Although the exact chemical nature of the antiseptic body occurring in the urine has not been definitely settled, it seems clear, both from the bacteriological and chemical evidence, that it is not free formaldehyde. The readiness with which urotropin is decomposed by acids, and to a less extent by acid salts, together with the more marked inhibitory power over the growth of microorganism shown by the acid urine over simple urotropin solution or an alkaline urine, would suggest that it is not the urotropin itself which is the most important factor in producing this kolyseptic action. It seems probable that acid urines produce in the kidney a partial decomposition of the urotropin by which some body is liberated, or a fresh compound formed which has very marked inhibitory powers over the growth of bacteria. If this hypothesis is correct an important point in securing the full effect of urotropin in bacterial infections of the urine would be that the urine should be acid in reaction as it leaves the kidney. That this is so is borne out by clinical experience. One condition in which it is preeminently useful is typhoid cystitis. Here the urine is generally acid, and the administration of urotropin quickly causes the bacilli to disappear. It has also been found useful in cystitis accompanying enlarged prostrate and stricture of the urethra. Here, too, the urine is usually acid as it leaves the kidney, and only becomes alkaline from the ammoniacal decomposition which takes place in the bladder. In suppurative pyelitis and in cystitis caused by calculus in the kidney or bladder a similar condition of the urine obtains, and good effects follow treatment by urotropin. The administration of urotropin as a means of insuring antiseptic urine and an aseptic condition of the genito-urinary tract in operations on those regions has been highly recommended by Casper. Other conditions, such as bacteriuria and the nocturnal enuresis of children, the latter being said to be frequently caused by infection with the bacillus coli communis, would probably be found to be benefited by treatment with urotropin, since the urine is acid in reaction. Experience has shown that gonorrhea and tuberculous cystitis are not appreciably benefited, but the condition of the infection in these

two diseases is different to those previously mentioned—the micro organisms are not in the urine but lie chiefly in the tissues.

As a urinary antiseptic urotropin appears to be much superior to those usually employed (*e.g.*, salol, ammonium benzoate, boric acid, guaiacol, naphthalin, and resorcin), especially when the acidity of the urine is insured by suitable means. It is not, however, only as a curative agent in the ordinary forms of urinary infection that the advantages of the drug are so apparent, but in typhoid fever it may be employed from the third or fourth week onward to the advantage of both the patient and the community at large. Recent researches have shown that typhoid bacilli occur much more frequently in the urine than has been generally supposed, and that they may persist for very long periods after convalescence (five years). By the systematic use of urotropin in all cases the very real danger from this source, which is so frequently overlooked, may be entirely avoided.—*Therapeutic Gazette.*

THE TREATMENT OF SCIATICA, ARTHRITIS DEFORMANS, AND SCLERODERMA BY SUPERHEATED DRY AIR.*

In this article Neumann describes the results of the Tallerman method of applying superheated dry air in the treatment of these diseases. After considering the methods of application and the degree of temperature which is obtained, he gives his results derived from the study of a long series of cases treated by this method. He believes, unlike many of the English investigators, that in most cases improvement is slow and gradual, while especially insisting upon the absence of ill-effects on the local seat of mischief or on the whole system. He states, in particular, that he has never been able to discover that it causes any wasting or has a lowering effect on the general strength; on the contrary, in precisely the most successful and, at the same time, the severest cases the general health and appearance have notably improved through the relief from pain and the powerful stimulation of the circulation. In Germany the Tallerman apparatus has been installed for the public use at various curative resorts, and at one of these, Landesbad, Neumann has had ample opportunity of employing the treatment and studying the results. The indications for the treatment are chiefly rheumatic neuritis, chorea, gout, chronic rheumatism, rheumatic arthritis, stiff and swollen joints, sprains and ruptures of joints, fractures and inflammation, flat-foot, etc. In the course of the past year this treatment has been applied to seventy cases of sciatica and lumbago, thirty-five of arthritis deformans, as well as in numerous cases of other conditions mentioned. With the exception of three cases of sciatica and lumbago, one of ankylosis of the knee joint, two of arthritis deformans, two apparently of old fractures of the neck of the femur, and one case of inflamed flat-foot, and one of scleroderma, all the other cases were either substantially improved or completely cured. At the conclusion of his article, Neumann gives notes of a few of the cases so treated, including ten of sciatica, nine of arthritis deformans, one of scleroderma, and one of myxedema.

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* Neumann. *Lancet; Maryland Medical Journal.*

ELIMINATION OF PERITONEAL INFECTION AND PREVENTION OF SURGICAL PERITONITIS *

FOR the past six years the writer has been interested in the functions and anatomy of the peritoneum. In 1896 he took radical ground against abdominal drainage in many cases in which it was then used. He strongly favored thorough irrigations of the abdominal cavity at the completion of an abdominal operation to remove as far as possible all debris, blood and infectious matter, and then leaving a considerable quantity of salt solution in the peritoneal cavity to disseminate and promote rapid absorption.

Some epoch-making work on the anatomy, physiology and pathology of the peritoneum is reviewed. He next considers in greater detail a most interesting research on the action of streptococci upon the peritoneum, which he uses in sustaining his position concerning the natural peritoneal method of drainage.

He quotes Walgreen at length to show that although there is at first an increase in leucocytes, after six to eight hours they markedly decrease, giving fuller sway to the infection of the peritoneum. Consequently, by distributing the same amount of infection over a large area of peritoneum, the early increase of leucocytes can do greater damage to the infection.

In 1896 the writer advocated leaving a little salt solution in the peritoneal cavity at the completion of the abdominal operation, and then lifting the foot of the patient's bed for twenty-four hours with a view of hastening absorption. Now, five years later, he concludes that the postural position is unnecessary, as absorption is almost as rapid in the prone position, and the churning of the intestines in the saline fluid facilitates the distribution of the debris and enables the intestines and omentum to float out into their normal position.

Without qualification he says that the routine use of normal salt solution in the peritoneal cavity is not only free from danger, but is of the greatest value as a life-saving measure and as a prophylactic against general or local peritonitis.

He and his assistant have carried out a series of experiments to confirm Muscatello's conclusions concerning the transportation of small granules from the peritoneal cavity. For the purpose carmine, india ink, and ultramarine granules were used, and within a very few hours the foreign bodies were found generally distributed throughout the organs of the body in the following order: In the lungs, then in the liver, spleen and gastro-intestinal tract, then in the kidneys, and finally in the bone-marrow, the lymph glands, and dependent parts of the body.

The investigations were conducted with a view of discovering the ultimate distribution of these foreign bodies, for it was believed that the fate of micro-organisms under similar conditions must be analogous.

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* Clarke. *Journal American Medical Association; Maryland Medical Journal.*

The argument in favor of salt solution is based upon the following proposition: Given a minimum amount of peritoneal infection, it is infinitely better to distribute it once before the micro-organisms undergo manifold sporulation than to hope for its elimination after it has gained virulent headway through stagnation or clinging to operation fields within the abdominal cavity. By at once distributing a minimum amount of the infectious material generally throughout the body the micro-organisms are promptly placed in the most favorable situations for their destruction and elimination.

Whether the alexin or the phagocytic theory concerning the destruction of micro-organisms be accepted is immaterial, for in either case it is better that the micro-organisms be quickly deposited where the antagonistic factors are dominant than to be left behind in the peritoneal cavity, into which the leucocytes and serum more slowly flow.

It was found from investigation that the normal lungs and also the kidneys may withstand and eliminate comparatively large quantities of infectious matter when carried quickly from the peritoneal cavity to these organs. It is the continued action of infectious matter, carried hour after hour from a generating focus in the peritoneal cavity which works destructively on these organs, and secondarily on the general system. Besides the aforementioned benefits derived from intraperitoneal salt solution, all of the other advantages given by the salt solution, introduced elsewhere, are found here also, as, for instance, in hemmorhage, shock and the urinary excretion. One objection may be offered to the saline infusion, but in no case was it found to be serious. Within the first twenty-four to thirty-six hours after the operation patients not infrequently complained of distress from the diaphragm similar to a pleuritic pain.

"The chief tenet in the argument is based upon the enormous and rapid absorbing function of the peritoneum, which absolutely precludes the possibility of limiting to any surgical field in the peritoneal cavity septic matter or micro-organisms. Accepting this hypothesis as proved, I link my next basal theory to it as follows: Given an infection at the time of operation, it is infinitely better to promote its rapid elimination from the peritoneal cavity than to retard it or attempt to definitely localize or remove it by surgical drainage."

CONCLUSIONS.

"1. The peritoneum has an enormous absorbing function, being capable of taking up 3 to 8 per cent. of the entire body weight in an hour.

"2. Minute solid particles are carried in an incredibly short time from the peritoneal cavity through the diaphragm into the mediastinal lymph vessels and glands, and thence into the blood circulation, by which they are quickly distributed to the abdominal organs and to the bone-marrow.

"3. The granular bodies are at first largely transported as free bodies, swept along by the lymph currents, but later the leucocytes act as carriers.

"4. There is normally a force in the peritoneal cavity which carries fluids and foreign particles toward the diaphragm regardless of posture, although gravity may greatly favor or retard the current.

"5. After the introduction of micro-organisms into the peritoneal cavity there is great decrease in their number within the first hour both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is therefore no possibility of limiting free infectious matter to any part of the peritoneal cavity by mechanical means.

"6. Vigorous streptococci which remain behind develop in six hours a repellent or destructive quality for leucocytes, and the lethal combat is therefore inaugurated and well under way before drainage as employed can possibly exercise any beneficial action. In many cases, therefore, in which surgical drainage is employed the patient recovers in spite of, and not because of it.

"7. A moderate amount of virulent organisms carried by the blood to the lungs, liver and spleen, kidneys, gastro-intestinal tract and bone-marrow may be destroyed or eliminated without the least harm to the patient, whereas if the same amount of infectious matter is detained about a surgical field in the abdominal cavity, or stagnates in a dependent pocket, they may generate myriads of others, and thus overwhelm the patient.

"8. In many cases, therefore, drainage as ordinarily employed is superfluous, or even dangerous, and the rational method is to remove all possible debris and infectious matter by thorough irrigations, and to leave one liter of salt solution (6 per cent.) in the abdominal cavity. In order to promote and hasten natural drainage, supplement this by an enema of a liter of salt solution given while the patient is well under anesthesia and in the Trendelburg posture.

"9. Under this plan the patient is greatly stimulated, shock is minimized or averted, the urinary excretion is greatly increased, and thus toxic matters are more easily eliminated without irritation to the kidneys or the bladder, peritoneal infection is quickly eliminated while yet minimum in amount, thirst is alleviated or entirely prevented, intestinal peristalsis is promoted, and consequently tympanites is of less frequent occurrence, and early action of the intestines evacuates infectious matter thrown out into this canal by the blood-vessels of the villi.

"All of these factors combine to reduce mortality after abdominal sections, to decrease pain, discomfort and the complications of the first forty-eight hours, and finally to hasten the recovery of the patient.

"*Cases in which peritoneal infusions may be dangerous, and therefore should not be employed:*

"1. Ascites accompanying the surgical lesion, which indicates that the natural peritoneal drainage is already deficient. Therefore to add an additional burden through the saline infusions is not advisable.

"2. General purulent peritonitis."

MISCELLANEOUS.

OUGHT THE STARCHES TO BE ELIMINATED FROM THE NOURISHMENT OF VERY YOUNG CHILDREN.

Borde, although admitting that mother's milk ought normally to form the nourishment of the infant, still, when this is impossible to procure, believes that aqueous solutions of starches should be combined with cow's milk for feeding. These decoctions are soothing to the intestine. They are also nutritious. In the starches he includes the starch of the potato, tapioca, starch of wheat, arrow-root, etc., also the decoctions of rice, barley, oatmeal, etc. He emphasizes the advisability of making these decoctions with water, not believing in their efficacy when cooked with milk. But milk can be mixed with the prepared decoctions with benefit. He concludes that: Aqueous decoctions of starch are digested by very young infants; they do not irritate the intestines, but exert a soothing influence, preventing the acute infectious gastro-enteritis of summer; they also aid in curing these affections by replacing advantageously cow's milk and even mother's milk during the acute stage of these maladies. These foods are very nutritious, preventing rachitis and chronic digestive troubles in the babe brought up on cow's milk; the best of these is oats coarsely ground, which contain, besides the starches, albumen and assimilable vegetable phosphates, very useful in the dietary of the child. These starches should first be cooked in water and the resulting product mixed with milk.—*Gazette Hebdomadaire des Sciences Medicales de Bordeaux*, April 28, 1901.—*The Dietetic and Hygienic Gazette.*

THE FIELD FOR ETHYL CHLORIDE NARCOSIS.*

After considering the literature on the subject, and his own experience in both the major and minor operations, Ware comes to the following conclusions regarding this anesthetic: It is as safe, statistically, as any of the others; it induces a very rapid narcosis and equally as quick awakening, and is devoid of after-effects. Against its chief competitor, nitrous oxide, be it said, that it is cheaper, does away with any special apparatus, is portable, and its market is so widespread already as to place the drug at hand for the vast majority of physicians and surgeons.

Indications for its use rise in all minor work in which the exact limits of operative procedure can be predetermined. It has proved efficient for curettage and obstetrical anesthesia, expression of trachoma, reduction of fractures, and as a preliminary to narcosis with other agents. In the latter direction the experience of Dr. J. T. Tuttle amply testify. Likewise the beneficient effect of the mixture employed by Dr. Willy Meyer is in no small measure due to the ethyl chloride it contains. Dr. Ware concludes, therefore, that its future is secure, and that it should take a place among the commonly employed anesthetics.

*Martin W. Ware, M.D. *Medical Record: Maryland Medical Journal.*

THE BACTERICIDAL ACTION OF BILE.*

Talma, after consideration of previous experiments performed to determine this point by Vallée, Sieber, Nencki, Fraser, Gilbert, Mosse and others, gives the results of a careful series of experiments performed by himself in which the colon bacillus and diphtheria bacillus, and the typhoid bacillus were tested in this connection. His conclusions are: First, the bile contains a substance which inhibits the growth of colon bacilli, typhoid bacilli, and diphtheria bacilli in most cases. Second, the sensitiveness of the different varieties of bacilli is very variable; virulence especially is not synonymous with tendency to infect the gall-bladder and gall-ducts. Third, the bactericidal property of the bile varies at different times and in different animals. The number of bacteria which succeed in reaching the biliary system is of great influence upon their subsequent fate. The epithelium of the gall-ducts and the liver-cells offer a strong resistance to the invading microbes, especially the diphtheria bacilli.

Habitual Constipation.

Inject 8 ounces of tepid water on retiring, and allow it to be retained until absorbed. Increase the quantity progressively each night while lowering the temperature of the water. If necessary, give an ordinary injection in the morning. Four to six weeks suffice to establish unaided defecation.—Klemperer (*Medical Record*).

Sciatica.—

The following formula for the relief of sciatica, acute or sub-acute, is the most effective I ever prescribed:

Opium powd.	12 grains
Ipecac powd.	12 grains
Sodium salicylate	90 grains
Cascara, extract fluid, q. s.	

Make twelve pills and give one or two at a dose.

These induce activity of the skin, relieve pain, and keep the pulse free.—Benjamin Ward Richardson (*The Asclepaid.*)

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Wintergreen oil, true	4 drachms
Turpentine oil, rectified	4 drachms
Acacia syrup	2 ounces
Cinnamon water	1 ounce

Make emulsion. Give a teaspoonful three or four times daily.

—Dana.

Diarrhoea, Obstinate.—

Silver nitrate	1 to 2 grains
Powd. gum Arabic	160 grains
White sugar	1 ounce
Water, distilled	8 ounces

A teaspoonful every two or three hours. —Constatt.

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*Talma. *Zeitschrift für klin. Medicin*, 1901 Vol. XLII, Parts 5 and 6.

NEUROTIC CONDITIONS OF CLIMACTERIC PERIOD.

This form of neuroses is considered by the latest and best authorities as essentially hysterical and neurasthenic; a statement that seems borne out at least in part by the predominence of the various reflexes. How far the latter condition may be due to irritation of the nerve-ends in the ovary depends, it would seem, on the degree of atrophy and consequent contraction of the tissues. The ordinary physical disturbances due to menstruation in some cases persist and cause various phenomena and often much annoyance And while many of these symptoms may be, and some of them doubtless are, neurasthenic, it will be found wise not to abandon special medication. In the greater number of cases, two five-grain antikamnia tablets repeated every hour if necessary, will be found to give entire relief. Under this treatment the reflexes are naturally abolished, the nerves are soothed and the system returns to its normal equipoise. Antikamnia tablets are essentially pain-killers, yet in thi instance they nullify the reflexes almost precisely after the same physiological fashion, so to speak, as they relieve pain, and without unpleasant after-effects. In cases of threatened metrorrhagia it is always advisable to administer "antikamnia and codeine tablets" as frequently as may be found necessary, say one every hour until six are taken. (George Brown, A.M., M.D., Atlanta, Ga.)

MEDICAL EXCHANGE.

Dr. W. E. Hamill, who conducts the Canadian Medical Exchange for the purchase and sale of medical practices, has removed his office to the Janes' building. On another page he presents some very inviting offers—which is revised every month so as to include the latest. We commend the Canadian Medical Exchange Office under the able management of Dr. Hamill to any of our readers who wish to buy or sell a medical practice.

THE CANADA LANCET

VOL. XXXV. SEPTEMBER, 1901. No. 1.

EDITORIAL.

THE VALUE OF BLOOD EXAMINATIONS IN SURGICAL DIAGNOSIS.

THE clinical value of blood examinations, especially in the more purely medical cases, is well appreciated by the profession at large. In this way only can a diagnosis be arrived at in many cases, such as in leukaemia and pernicious anaemia, not to mention malaria and other parasitic diseases, and information of prime importance is gained with reference to other conditions. Less attention has been given in applying these means as an assistance in surgical diagnosis. The matter is discussed in a paper by Bloodgood (*Maryland Medical Journal*), based largely upon the results obtained in the examinations of surgical cases in the Johns' Hopkins Hospital. He calls attention to the dangers attending on general anaesthesia, especially if prolonged, in cases where there is much reduction in the percentage of haemaglobin,—estimates below 50 per cent. being danger signals pointing to the advisability of building up the patient's blood before subjecting him to the risks attending its use.

A slight increase in the number of leucocytes follows the administration of ether but in an ordinary operation they return to the normal within six hours. After this time a sudden rise in the leucocyte count, points to some post-operative complication. In intestinal obstruction, in from 8 to 20 hours from the onset the leucocytes rise to above 20,000. In cases of abdominal distention following operation, apparently due to intestinal paralysis, the leucocytes do not rise above 12,000 to 15,000, so that a careful estimation of them enables the surgeon to differentiate between this condition and peritonitis or obstruction.

In appendicitis, however, the value of a careful estimation of the number of leucocytes has found its most important application in surgery. With few exceptions, a rising leucocytosis points to the necessity for operation. A leucocyte count of 18,000 or over, in the first 48 hours

indicates an advanced pathological lesion, as gangrene, an appendix distended with pus, abscess or beginning peritonitis. In some cases, however, an abscess may be present without any, or only slight leucocytosis, and in cases of intense septic peritonitis the number is but slightly or not at all increased. In this type of case, a low leucocyte count is consequently of unfavorable significance. In acute attacks of appendicitis, where the leucocytes have been below 18,000, or have fallen in number when counted a number of times, the patients have recovered without operation.

The clinical value of blood examinations in these cases will readily appeal to every practitioner who appreciates the difficulty in selecting cases for operation and deciding when to perform it. While not positive, the information gained in this way is of the greatest assistance in conjunction with other data, in enabling the surgeon to arrive at a conclusion. The necessity for careful technique and accuracy need scarcely be insisted upon, otherwise the results will not only be useless but positively misleading. Only thorough acquaintance with the methods and practice in their application can give the skill requisite to make the results obtained by the observer a safe guide in any case.

THE BRITISH MEDICAL ASSOCIATION AND THE COLONIES.

Probably the most important item of business at the Cheltenham meeting was the report of Mr. Edmund Owens' Committee, the Constitution Committee. It is most exhaustive, and after thorough discussion at successive general sederunts of the Association, was adopted with little change from the original. Special interest attaches to it from the provision specially made for membership in India and the Colonies. The fact that Mr. Owen is of Canadian birth is interesting in this connection. The Imperial Federation idea is fructifying rapidly in the British mind, as well as in the Colonial, and it is earnestly to be hoped that the cause will be helped forward, as it can be very effectively, by a prompt and widespread decision on the part of the profession in Canada and elsewhere to avail ourselves of the advantages of membership in so old and honoured a body as the British Medical Association.

The primary unit of organization is the Division, and a group of Divisions is known as a Branch. The Division is to be small enough geographically to allow all members in the Division "a reasonable opportunity of attending every important meeting thereof."

The autonomy of the Divisions and Branches is safeguarded so perfectly that we feel we can make the sweeping suggestion that the large and useful societies already existing in Canada, particularly the

Provincial and the Canadian Medical Associations, would add to their prestige and usefulness by "coming in" as they are, already organized.

The Ontario Medical Association could become the Ontario branch of the British Medical Association, with Divisions, such as the Toronto, the Hamilton, or the York County, the Wentworth County, etc., Divisions of the British Medical Association. And societies already existing locally, such as the Clinical, Pathological, Toronto Medical, etc., here could, we are persuaded, with much advantage, become the Pathological, Medical, Surgical, etc., sections of the Toronto Division of the British Medical Association. The idea has long been current in Toronto that an Academy of Medicine should be formed as a centre round which the separate societies might group themselves, as in New York and other large centres. It seems to us that this affords an opportunity for a much larger, better scheme, by which, apart from patriotic or national motives, we might secure the professional stimulus, strength and widening of outlook which must attend membership in a worldwide association, with the Journal coming to each member and bringing every week the latest and the best of medical science to our library tables from the very ends of the earth.

The provisions made for self government, election of members, representation in the Central Council and representative meetings, annual subscription, and grant to branches, are of the most liberal kind, and it appears to us that some general and concerted move in the matter should be made, rather than isolated sporadic attempts resulting only in forming "Divisions" here and there in the large Canadian centres.

J. T. F.

AN IMPORTANT JUDGMENT.

A case involving a point of more than usual interest to the medical profession was decided in Toronto last week. A leading surgeon of the city was called in consultation with the physician in charge of a case. An operation was deemed necessary, of which fact the woman's husband was acquainted, and with which he was satisfied. The patient was operated on and made a good recovery. The first dissatisfaction arose when the surgeon wished to be paid. The husband refused payment on the ground that he had not retained the surgeon's services and that the attending physician had no right to do so. The case came before Chief Justice, Sir William Meredith, and was decided in favor of the consultant, who received judgment in full for his fees, with costs.

The decision is one that will meet with the approval of all fair minded people, and the surgeon is to be congratulated in refusing to compromise a case that involved not only his own rights but the interests of the profession in general.

EDITORIAL NOTES.

The subjoined clipping from the *Toronto Evening News* is a hopeful sign and indicates possibly the rising of the tide of public opinion against the vagaries of those hopeless visionaries, the misnamed "Christian Scientists." The jury we trust represents the opinion of the public at large in its sensible and caustic comments.

"Mr.——,the Christian Science operator was recalled, and put through a questioning as to his views on contagion. He found himself embarrassed. He apparently lacked the nerve to say there was no such thing as contagion, and yet he halted before tossing overboard the fundamental principle of the Christian Science belief. He simply could not find a satisfactory answer to Mr. Dewart's questions, and did some tall hedging.

The jurors returned the following verdict:—

That the said Roy Lewis came to his death on Tuesday, August 13, at the home of his parents, 18 Markham street, from diphtheria, and we find that Andrew Lewis, the father of the deceased, showed culpable criminal negligence in not providing medical assistance, medicine, nursing and comforts, and that Richard Perry, the Christian Science demonstrator, was an accessory after the fact, inasmuch as he undertook to advise and treat a dangerous and contagious disease, which he admitted he was totaly ignorant of. The teaching of the sect known as the Christian Scientists, as brought out in the evidence, is a danger to the community, and the jury would recommend that the law should make it a criminal offence for a demonstrator of this peculiar sect to attend or treat a case which is not being attended by a duly qualified practioner."

Varsity Men of 1890.—A very pleasant hour was spent Sept. 3rd at luncheon in Webb's restaurant on the Exhibition grounds by the Toronto University medical graduates. Letters of regret were read from Professor L. Barker, Philadelphia, Dr. R. V. Bray, Chatham and Dr. H. H. Oldright, St. Catharines. The following officers were elected: Chairman, Dr. Thomas E. Kaiser; Vice-Chairman, Dr. E. Herbert Adams; Cor.-Secy., Dr. Arthur Mayburry; Rec.-Secy., Dr. W. C. Herriman; Treas., Dr. W. H. Philips; Executive, Dr. L. Barker, Dr. R. V. Bray, Dr John Haul, Dr. J. L. Smith.

Huron Medical Association.—The regular quarterly meeting of the Huron Medical Association was held in the Council Chamber, Clinton, on Sept. 6th, those present being Drs. Turnbull, Goderich; Woods, Bayfield;

Smith, Mitchell; McKenzie, Moncton; McCallum, Londerboro; Robertson and Dunsmore, Stratford; Shaw, Gunn, Graham and Thompson, Clinton. Dr. Dunsmore was elected president; Dr. Burrows, vice-president and Dr. Shaw re-elected secretary-treasurer. Dr. Smith read a paper on "Erythemar Multiforme" which simulated small-pox, rendering much care necessary in pronouncing a diagnosis. Dr. McKenzie read a paper on "Lightning Stroke," exhibiting the clothing and shoes that had been badly burnt, still no bad effects followed; he also read a paper on "Three Cases of Nervous Diseases in Children." Dr. Shaw read a paper on "The Treatment of the Prostrate Gland," Dr. Graham taking the medical treatment, Dr. McKay, etiology, Dr. Gunn, the surgical treatment.—*Clinton New Era.*

The opening lecture of the University of Toronto Medical Faculty will be delivered by Dr. J. F. W. Ross, in the Biological Department of the University, on Wednesday evening, Oct. 1st, at 8.30 o'clock.

PERSONAL.

Dr. F. H. Ferguson (Trinity '01), has begun practice at Delta, Mich.

Dr. W. F. Pratt, of Ottawa, was found dead in bed on the morning of September 19th.

Dr. Jas A. Ashbaugh, (Trinity '91), of Windsor, has been spending a few days in Toronto.

Dr. B. Coats, (Trinity '92), and Dr. Ira Tripp, (Trinity '96), of Cleveland, are visiting friends in Toronto.

Dr. R. Hillier, of Leamington, Ont., has been spending the summer at the New York Post Graduate School and Hospital.

Dr. Thos. S. Cullen, Associate Professor of Gynaecology, Johns' Hopkins Medical School, was married recently.

Dr. and Mrs. George A. Bingham, of Church St., Toronto, have returned from Europe, where they have been spending a holiday.

Dr. R. B. Nevitt, of Jarvis St., Toronto, has purchased a property on Bloor St. W., where he will remove in a short time.

Dr. J. J. McKenzie, Professor of Pathology, Toronto University, has returned from Europe where he has been spending the summer in laboratory work.

Dr. Alex McPhedran of Bloor St., Toronto, has returned from Europe. Dr. McPhedran is giving his attention entirely to consulation work in medi cine.

The engagement of Dr. Allen M. Cleghorn, (Trinity '92), lecturer in Physiology in the Harvard Medical School, Boston, to Miss Gartshore, London, is announced.

Dr. Samuel Westman, of Spadina Avenue. Toronto, was married on September 17th to Miss May Pugsley, daughter of John Pugsley, Esq., of Bloor St., Toronto.

Dr. Donald McGillvray, (Toronto '98) and subsequently a member of the resident medical staff of the General Hospital, has opened an office at 12 Carlton St., Toronto.

Dr. Nathan Smith Davis, LL.D., is the oldest living president of the Chicago Medical Society, and will be banquetted by his fellow-members at the Auditorium Hotel, Chicago, on August 5th.

In the annual announcement of the *New York Polyclinic*, just issued, Dr. Price-Brown's book on "Diseases of the Nose and Throat," has been placed on the list of recognised text-books.

Dr. T. B. Futcher, of the Johns' Hopkins Hospital, Baltimore, is spending a few days with friends in Toronto. Dr. Futcher is going into private practice, opening an office in Baltimore this fall.

Dr. Norman M. Harris, assistant in Pathology, Johns Hopkins Medical School, who has been spending the summer in research work in Europe, is visiting friends in Toronto on his way back to resume his duties in Baltimore.

Dr. Donald Armour, formerly a member of the resident medical staff of the Toronto General Hospital, has resigned his position in the Anatomical Department of Chicago Unverisity, and returned to London, England, where he has an appointment on the staff at University College.

Dr. H. J. Hamilton and Dr. J. O. Orr, of Toronto, gave a dinner at the Albany Club on Sept. 19th to Dr. John Caven, of Toronto, on his resuming professional duties after his illness, at which a number of Dr. Caven's intimate friends were guests

The medical profession generally will be glad to learn that Dr. John Caven, formerly Professor of Pathology in the University of Toronto, which position he resigned owning to ill-health, has entirely recovered and will shortly enter upon consulation practice in Toronto.

The LANCET offers congratulations to Dr. Charles O'Reilly, superintendent of the Toronto General Hospital, on his being elected Vice-President of the American Association of Hospital Superintendents at their recent meeting in New York. This is another instance of the international good-fellowship at present existing, as Dr. O'Reilly was the only Canadian at the meeting.

OBITUARY.

THE LATE JOHN DUNCAN.

Among the many unfortunates who lost their lives by the wrecking of the steamer Islander in Lynn canal while en route from Skagway to Victoria was one of the best known members of the medical profession on the Pacific coast, Dr. John A. Duncan, of Victoria, B.C. The accounts of the disaster given by the survivors state that Dr. Duncan, utterly forgetful of his own safety, perished in a futile attempt to save the wife and child of Governor Ross of the Yukon district.

Dr. Duncan was a native of Russell County, Ont., and was graduated from McGill College. He went west with C Battery during the Riel Rebellion in 1885 and the following year settled in Victoria, where he continued to practice until the time of his death. Such kindliness of disposition, unselfishness, courage and true manhood as he exemplified throughout his professional career, had a fitting termination in a death by giving his life to save others. He has not only left a name that will always be cherished by those who knew him, but he has reflected lasting honor on the profession to which he belonged. His untimely death, under such sad circumstances, has caused the deepest sorrow among all classes of the community.

The funeral service in St. Andrew's Presbyterian Church was conducted by the Rev. W. Leslie Clay, who, in eulogizing the deceased, made a very feeling reference to the Doctor's unselfish professional wont.

BOOK REVIEWS.

Rhinology, Larynology, and Othology, and their significance in General Medicine, by E. P. Friedrich (Leipzig). Translated and Edited by H. Holbrook Curtis (New York). Published by W. B. Saunders & Co., Philadelphia and London, Canadian Agents; J. A. Carveth & Co., Toronto.

In this volume, as is well said by the translator, "we greet a masterly treatise of a thoroughly original type, the intrinsic worth of which warrants its appearance in our own language."

The author has discharged his duty thoroughly, confining himself to the positive, and disregarding the speculative, in his endeavor to present to the reader nothing but exact and well established information upon the relations which manifest themselves as disturbances of the general

organism in disease of the nose, throat and ear, or as disturbances of the special parts in general disease.

The translation has also been exceedingly well done. The treatise is easy to read; there are no involved sentences, the interest is well sustained and the work is one which every general practitioner desiring to acquaint himself with the rapid advances of otolaryngology must peruse with profit and satisfaction.

The arrangement of the subject matter is such that the general practitioner here possesses the facilities for obtaining information bearing directly upon his general cases in a way that no text-book on these specialties with which we are acquainted has yet given him.

To treatment, there is but one reference in the whole book.

Where there is so much that is good it is difficult to make selections, but the opening chapter upon the interdependent relationships of the upper and lower air passages, the ear and the lungs are especially valuable, and among the opinions expressed by the author and proved by a resolute marshalling of all the facts bearing thereon, one may quote the following:

"Every and all diseases of the nose and post-nasal space which are followed by obstructions of the nasal passages lead to passive hyeræmia in the mucous membranes (of the ear), which in turn produces occlusion of the Eustachian canal."

"There can be no hope of curing the ear affection before the causes which are responsible for the congestion have been removed and the permeability of the tube restored."

"We cannot emphasize too strongly that air douches, as well as the ordinary nasal douche are to be avoided in acute diseases of the nose and throat with inflammatory charges in the Eustachian tubes."

"The changes produced in the shape of the upper maxilla by obstruction of the nasal respiration" are classified after Korner, and the opinion expressed that they are due to "the pressure exerted on the sides of the jaw by the stretching of the cheeks when the mouth is open."

"Marasmus must be regarded as a frequent cause of the disease of the ear found in infancy and in early childhood associated with diseases of the gastro-intestinal canal." "In all intestinal diseases of infants accompanied by rise in temperature and loss of weight, the ears should be examined to ascertain whether any inflammation is present."

The chapters on the acute infectious diseases are also especially worthy of mention. The author states that a "review of our knowledge concerning the nature and course of the otitis of measles justifies the conclusions that there are two varieties, the second representing a complication of the first: 1st, a true measle eruption affecting the mucous membrane (of the ear), and 2nd, a suppurative process with perforation as a result of mixed infection, which finds a favorable soil in the mucous membrane weakened in its resisting power by the primary disease."

"In scarlatina," the catarrhal angina represents the earliest reaction of the organism to the scarlatinal poison, which gains entrance to the system through the mucous membrane of the throat (restricted in the main to the pharynx, foucial pillars and tonsils). "While the acute otitis

media beginning during the period of desquamation (3rd to 4th week) is plausibly due to the action of the same toxins which give rise to the nephritis (of the same period).

The references are chiefly confined to the continental investigators, while those of England and America receive scant notice: still the view point of the author displays most extensive acquaintance with experimental research, and the blame may rather lie with ourselves.

GIBB WISHART.

JOURNAL OF MEDICAL RESEARCH.

A Continuation of the Journal of the Boston Society of Medical Science. Edited by Harold C. Ernst, M.D. Vol. 1, No. 1.

This Journal is supported by the American Association of Pathologists, the Boston Society of Medical Science, and other sources of strength.

The Journal will be promptly issued in numbers as often as material for fifty or more pages is received. The numbers will make up volumes of about five hundred pages, price $4.00 per volume. The present number contains nearly three hundred pages, with no advertisements The idea of promptly publishing the results of original research in medical science is a happy one, and the work as given in the present number is of the highest order. The type and paper are good: and the plates (some of them colored) leave nothing to be desired.

The Journal will be of great value to those engaged in laboratory work, and when we bear in mind that original research and the cosmopolitan tendency of medical science has lifted the profession from mere empiricism to an acknowledged science, we cannot but conclude that it is the duty of every practitioner who wishes to keep abreast the times, to read and give his support to each research.

Bacteriology, with Pathology and their confrere Histology, are the foundation of Medical Science proper of to-day, and the gentlemen are philanthropists who spend their time and energy in original research in these subjects.

L. BENTLEY.

ANDERS' PRACTICE OF MEDICINE.

A Text-Book of the Practice of Medicine By James M. Anders, M.D., Ph.D., L.L.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Fifth Edition, thoroughly revised. One handsome octavo volume of 1,297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth $5.50 net. Toronto: J. A. Carveth & Co.

In four years, five editions of the above work have appeared. This speaks very strongly in proof of the fact that the work has many valuable features: and has proven itself of real service to the general practitioners, for whom this work has been specially written.

The whole field of general medicines is covered by the work. In this respect it is very complete. Some diseases that are often regarded as surgical affections, as septicaemia, pyaemia, syphilis and empyema, find a place in the volume.

The work is brought thoroughly up-to-date. The latest views on infectious diseases and bacteriology are recorded. This portion of the work is particularly good. Among the infectious diseases are included acute and sub-acute articular rheumatism; catarrhal, amebic, diphtheritic and chronic dysentery, and muscular and chronic articular rheumatism. From this classification, some might dissent, but the author advances good reasons for the arrangement adopted.

The section on constitutional diseases is very ably written. Diabetes mellitus is regarded as caused by disease of the pancreas, usually granular atrophy, in about half the cases; to interference with the glycogenic function of the liver, from hepatic disease, or nerve derangement, as puncture of the fourth ventricle, or section of the pneumogastric nerve, to the ingestion of more carbohydrates and peptone than can be stored in the liver, alimentary glycosuria; and to any failure to convert the carbohydrates into fat by either the intestinal villi, or the liver. Diabetes insipidus may be caused by shock or fright, by infectious diseases, by intemperance or by heredity. In most cases it is of nervous origin. Arthritis deformans, the author contends, cannot be regarded as in any way connected with rheumatism or gout. It is of neuropathic origin, and is specially dependent on affections of the nervous system, as ataxia, shock, etc. Gout is discussed with much ability. He holds that there is an excessive absorption of nutritive substances, defective metabolism from imperfect development and too little exercise, defective elimination of waste products. The uric acid theory is well stated, and the opinion given that failure of the rural function precedes the gouty manifestations, and an excess of uric acid in the blood are responsible for most cases With regard to purpura hæmorrhagica it is stated that there can be little room for doubt that it is an infectious disease. The pathology of hæmaphilia is to be sought for rather in the vessels than in the blood. Vasomotor disturbances play an important part in the etiology of attacks. In many cases the middle muscular coat of the arterioles is wanting or very thin

Diseases of the blood and ductless glands are handled in an independent spirit. Chlorosis is regarded as due to a group of causes, such as heredity, a family tuberculous taint, unhygienic conditions, copraemia, nervous worries, grief, emotion, disappointment, home-sickness, etc., and sexual disturbances. Progressive pernicious anaemia is divided into cases in which no cause can be found, during life or after death; those where a cause is found only after death; and those where the cause is discoverable during life. With regard to the obscure group of cases, the author gives favorable consideration to the views of Stengel of a gastro-intestinal auto-intoxication, and of Hunter, that there is an infectious process in the digestive canal. Malignant disease and parasites have been found *post mortem* as causes. Hemorrhages, diarrhoea, worry, profound chlorosis, pregnancy, mental shock have been noted during life as causes. Leucocythaemia is regarded as most probably of microbic origin. The changes in the spleen, lymphatic glands, bone-marrow, and the granuloma character of the leukaemic growths point to this view. The views of Vehsemeyer and Kottmutz, that the disease is due

to auto-intoxication of the system by albuminoid and peptones, absorbed from the digestive canal, are mentioned. Hodgkin's disease, or pseudo-leukaemia, is regarded as having the weight of evidence on the side that it is an infectious granulomata of the lymph glands, though the infectious agent has not yet been discovered. As a proof of this there are instances of the disease developing in persons who were apparently in perfect health. Exophthalmic goitre is regarded as due to disturbance in the function of the thyroid gland. This is the view held by Möbius, and the author thinks it is amply supported by clinical evidence.

Autumnal catarrh, or hay fever, is regarded as due to the odorous principle of certain plants and inorganic dusts; but sometimes it is excited by strong emotional disturbances. Atropia, gr. $\frac{1}{300}$ every hour till the throat becomes dry is highly recommended. Or $\frac{1}{30}$ may be given hypodermically every three or four hours till the desired effect is produced. The author regards the paroxysms of ordinary asthma as due to cont action of the muscles of the smaller bronchi. This view is strongly combatted by many, and on what appears to be good grounds, the condition being due to a sudden dilatation of the vessels of the bronchial mucosa, and not to a contraction of the muscle fibres in them. In pleurisy the following rules are laid down for aspiration. In acute cases when one side is filled, when both sides ar' half filled, when rales are heard on the opposite side. marked displacement of the heart, dyspnoea, cyanosis, or syncope. In the afebrile stage aspirate if the fluid does not diminish in a week, or in subacute cases with little or no fever from the commencement.

In ulcerative endocarditis mention is made of the value of the anti-streptococcic and antistaphylococcic sera. The discussion on valvular diseases of the heart and their treatment is excellent. The advice on the use of digitalis, cardiac stimulants and tonics is reliable. The opinion that digitalis improves the nutrition of the heart muscles by improving the circulation is sound teaching. Arterial sclerosis in those under mid life is almost always due to alcoholism, syphilis, lead-poisoning, gout and chronic nephritis. A simple diet and the long continued use of potassium iodid are the mainstay in treatment. In the treatment of thoracic aneurism, rest and potassium iodid are given as of most value.

Throughout the study of diseases of the digestive organs, a good deal of attention is given to their infective, or bacterial side. In the etiology of gastric ulcers two conditions are held as definitely settled, self digestion of a portion of the stomach, and the previous reduction in the alkalinity of the part. In the diagnosis of carcinoma of the stomach much stress is laid on the absence of hydrochloric acid and the presence of lactic acid after a Boas's test made.

It would not be possible to review all the sections in detail; but they contain very full information for such as may consult them. It is a work of much individuality, the author always giving the reader the benefit of his opinion, as well as collecting the opinions of others. In the subjects of diagnosis and treatment, the work is full and explicit. The statements made are also in accord with the latest reliable researches.

The work is well gotten up. The paper, type and illustrations do justice to the publishers.

JOHN FERGUSON.

OPERATIVE SURGERY.

By Joseph D. Bryant, M.D., Professor of the Principles and Practice of Surgery, University and Bellevue Hospital Medical College. Vol. 2. New York, D. Appleton & Company, 1891. Canadian Agents, George N. Morang, Toronto.

When the first volume of this work was reviewed, the prediction was made that the completed work would take rank with the best in the English language and would be a worthy rival of the work of Treves & Jacobson. This second and concluding volume more than bears out such prediction.

Dealing with original surgery, it necessarily takes up those subjects in which the most signal advances of surgical science have been made in the present generation. Without going into details, one may refer to the section treating of operations on the viscera connected with the peritoneum, and this reviewer is prepared to take and maintain the statement, as no better presentation of the subject can be found in similar space elsewhere in the English language. It is not simply good, it is admirable! It is scientific, practical, helpful, in short, just what it should be and just what such sections often are not. As a guide to practice it is thoroughly modern and safely and scientifically aggressive. It can be commended without the least reservation Other sections of the work, as for example those dealing with the operations performed upon the head and neck, as well as upon the genito-urinary organs are equally satisfactory and show that every procedure discussed has been tested fairly and fully in the writer's own ample experience. The book is issued in D. Appleton & Company's well-known style, and having said this it is quite unnecessary to say more. N. A. P.

PUBLISHERS' DEPARTMENT.

THROAT AND LUNG TROUBLES.

The season will soon be here for the usual epidemic of coughs and colds with thousands of cases slow to respond to ordinary treatment. The value of Petroleum at the very beginning of throat and lung troubles is acknowledged by leading physicians of this country and England, the results being quick and decisive. The use of opiates or other narcotics that soothe and quiet temporarily is to be avoided. They disturb digestion and cause constipation, frequently doing more harm than good. Angier's Petroleum Emulsion with Hypophosphites soothes and heals the inflamed mucous membrane, and is the first thought of physicians who have used it in the treatment of coughs and bronchial troubles generally. Unlike Codliver Oil it does not upset the stomach or disturb digestion, but puts the organs in a condition to assimilate and digest nutritious food, and it may be prescribed with confidence in all diseases where Codliver Oil has been heretofore indicated.