

THE MANITOBA AND WEST CANADA

# LANCET

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## SELECTED ARTICLES.

### THE EPILEPSY OF NAPOLEON.

*(Concluded.)*

Zola, in the "Roman Naturaliste," gives us this point on the inspiration of Balzac: "He worked under the operation of certain impulses which are a mystery to us; he was the victim of a capricious power. At times for all the gold in the world he could not have written a line, at other times, in the evening, in the middle of the street or in a morning orgie, a burning coal kindled his brain, his hands, his tongue; on a sudden a word awakens hidden ideas which lie fermenting. So is the artist an humble instrument of a despotic power.

"My passions," says Burns, "are wild as demons if they do not find a vent in verse." After writing he felt relieved and consoled. Such are the confessions of Mahomet, St. Paul and Dostoyewsky. In "Besi" he writes: "Suddenly something opened before him, an extraordinary internal light illumined his mind; there are moments which do not last more than five or six seconds, in which you suddenly feel the presence of eternal harmony. This phenomenon is not terrestrial, nor celestial, but something that man in his earthly development can scarcely endure; he would be obliged to transform himself physically or die. It is an ineffable feeling. Suddenly it seems as if you were

put in touch with all nature. There is neither tenderness nor joy; there is no forgiveness, because there is nothing to forgive; there is not even love! Oh! it is a feeling higher than love. The joy that fills one is terrible; if this state should last more than five seconds the spirit could not resist; it would have to vanish. During these five seconds I live an entire human existence, and for it I would give my whole life, and should not feel I were paying too dearly." "Are you not epileptic?" "No." You will become so. I have heard it said that one begins in just that way. A man subject to this disease (evidently it is Dostoyewsky himself) has described minutely the sensation which precedes the attack, and listening to your description it seemed as if he were speaking. He also said that it would be impossible to sustain this state more than five seconds. Do you remember the vase of Mahomet? While it was being filled the prophet flew to paradise. The vase is your five seconds, and paradise is your harmony: Mahomet was epileptic." ("Besi," Vol. i.) And in the "Idiot": "I remember, among other things, a phenomenon which preceded his attacks of epilepsy, the weakness, the mental marasmus, which proved the disease. There were moments in which his brain suddenly became inflamed, and his vital forces all at once rose to a prodigious degree of intensity. The sensation of life, of conscious existence was increased tenfold in

these swift moments. A wonderful light burned in his mind and heart. All agitation became calm, all doubts, all perplexities, melted into a vast harmony. But these radiant moments were but the prelude to the last second which was immediately followed by the attack. This second was truly ineffable. When, later, the prince having recovered, reflected upon it, he said himself: "If these fugitive moments are owing to sickness and the suspension of normal conditions, then they are not of a higher life, but, on the contrary, one of a lower grade. What matters it if it be a sickness or an abnormal tension, when in looking back, recalling and analyzing it, the greatest degree of harmony and beauty are included?" In this moment did he not have visions analogous to fantastic dreams produced by intoxication with hasheesh, opium or wine? He could easily judge all these things when the attack ceased. These moments are marked by the extraordinary exaggeration of the inner sense; in the last moment of consciousness which precedes the attack the sufferer can say with full consciousness of his words, "For this moment one would give a lifetime." And without doubt the epileptic in this instant understands the allusion of Mahomet when he said that he visited all the mosques in less time than it took to empty his vase.

That we may see how perfect the correspondence is, compare this description of the psychic epileptic attack with the inspiration of genius, as authors describe it. Berlioz says: "A voice comes from my palpitating chest; it seems as though my heart, under the irritation of an irresistible force, expands as to be dissolved by expansion. Then the skin of my whole body aches and burns. I flush from head to foot. I wish to scream, call the assistance of some one who would console and guide me, and prevent my being destroyed, and detain the life which is ebbing away. I have no thought of death during this death, and the thought of suicide is unbearable, I wish to live, live with energies a thousand fold redoubled; it is a prodigious attitude of happiness, and a mania for activity, which can not be quelled except with devouring, furious realization

according to the measure of its intensity." Goethe said that the melody of verse, like a tiny, independent, impalpable thing, agitated within him before the words were formed, or the thought itself took shape. And Beethoven said, "I have told it, but they did not understand me, as they can not understand the power of artistic inspiration, as they do not understand that I act in accordance with internal laws, unknown to the vulgar, and that I cease to understand myself when the hour of enthusiasm is passed. Fools! In their cold exaltation, in their free hours, they select a theme, they develop, enlarge it, taking care to repeat it in another tone; they add by rule, wind instruments or some strange combination. All that is very reasonable, very polished, well studied; but could I work so? They compare me to Michael Angelo. Very well: how did the author of Moses work? With fire and furor; in a frenzy, he then made great strokes in the immovable marble, and forced it in spite of itself, to unlock his living thought sepulchered in the block; and I too compose thus. For me inspiration is that mysterious state in which the entire world seems to form a vast harmony, when every feeling, every thought, echoes in me, when all the forces of nature become my instruments, when a shuddering shakes my whole frame, when my hair stands on end."

These expressions demonstrate that where genius shows itself in the highest form, and where there is the greatest differentiation from the normal man, in the moment of inspiration he is more or less in that state of unconsciousness which, according to many, is the true characteristic of epilepsy.

"One of the characteristics of genius," writes Hagen, "is the irresistible impulse of the act." And thus is explained by Kant, Coleridge, Voltaire and Cardano, how works of genius can be created in sleep, as this is also a state of perfect unconsciousness, and how the double personality of genius, in the state of inspiration and in the state of normal mind, is a mystery to itself. The most salient characteristic of genius is therefore unconscious creation, which is the most singular, if not the sole phenomenon of epilepsy; and from that, to deduct that it is



a specially diverse variation of that *morbo sacro* (I do not repeat this synonym without reason) is a step which, even to the least learned in psychic materia, is not difficult. For those who do not know that in many cases the entire attack consists only in a violent excitation of a single sense followed by amnesia, I mention a patient of mine who is seized by a motorial attack, now only by vertigo accompanied by the sight of a bright yellow light; and another whose attack, preceded by aura, consisted in atrocious crural and brachial neuralgia, followed by amnesia. I will add that in some not only the attack, but the whole life, records the psychic phenomenology of the epileptic; but over and above all the example adopted here of Napoleon is enough.—Lombroso: *Rivista d'Italia*, March 15, 1898; translated by A. Goodwin Culver for the *Journal of the American Medical Ass'n.*—*Medical and Surgical Bulletin*.

#### THE OPERATIVE TREATMENT OF INTESTINAL PERFORATION IN TYPHOID FEVER.

This subject is one which interests the physician and the surgeon to an equal degree and deserves careful study by both, since in some cases life can be saved by prompt action.

There are no more interesting studies in medicine and surgery than those advances which meet conditions heretofore considered beyond relief, and there are few conditions more terrifying to the physician and to the patient's friends than perforation of the bowel in typhoid fever. Theoretically, at least, it would seem that with the progress which has been made in abdominal surgery operative interference is beyond all doubt the chief possibility for the recovery of the patient, yet as a rule both physicians and surgeons have in the past felt timid about resorting to so grave a surgical procedure in the face of the profound exhaustion of the patient from disease. In this connection the statistics which have been recently collected and published by Keen give us clearer ideas of our duty under these circumstances than any others with which we are acquainted. One of the first points impressed upon

us by these statistics is that delay is an exceedingly dangerous thing. Thus, as Keen points out, of the sixty patients operated on for perforation in typhoid fever, 26.7 per cent. recovered when the operation was done within twelve hours; whereas the mortality was total when as long as twenty-four hours had elapsed, except in three instances, in one of which the operation was done twenty-six hours after perforation and the other two between two and three days. As a result of these statistics Keen enunciates the law that if operation is not done within about twenty-four hours after the perforation there is practically no hope of recovery.

It is stated in *La Presse Medicale* of May 18, 1898, that Guecchewitsch and Wanach have recorded five instances in which Russian surgeons have operated for intestinal perforation. In 1891 Notschaieff and Troianoff operated upon a man aged thirty-one years, who presented signs of perforation. The operation was practiced six hours after the entrance of the patient into the hospital. Marked evidence of serious peritonitis were found and fecal matter was in the peritoneal cavity. Resection of the perforated portion was performed. Death followed and autopsy revealed typhoid ulcers in the ileum. In 1893 the same authors operated upon a man of twenty-eight years, who presented similar symptoms. On entering the hospital a diagnosis of the ambulatory form of typhoid fever was made, with intestinal perforation. The operation took place seventeen hours after entrance. A general sero-purulent peritonitis was found, the fluid being filled with fibrinous flakes. Quite a large perforation was present; four centimeters of the intestine was excised. The abdominal wall was not immediately sutured, but the opening in it was packed with sterile gauze, and complete recovery followed.

A third case was that of Kohlzooff and occurred in a man of twenty-four years who had typhoid fever and congestion of the lungs. He had symptoms of perforation with excessive fever. The operation was performed four hours after the perforation. Sero-sanguinolent fluid was found in the

peritoneal cavity, and twenty centimeters from the ileocaecal valve there was a perforation. A resection of the perforated portion of the intestine was performed. Death occurred in two days. At the autopsy numerous typhoid ulcers were found near the point of ulceration.

In the fourth case, belonging to Trianoff, a patient twenty-nine years of age had been sick for fifteen days with fever. He was seized with violent pain in the belly followed by intense chills, vomiting and hiccough. There was abdominal swelling and general pain. The symptoms were those of perforative peritonitis. The operation began sixteen hours after the accident. Abundant sero-purulent fluid was found in the abdominal cavity and perforation of the intestine had occurred ten centimeters from the ileocaecal valve. Resection of the perforated segment was performed and death occurred fourteen hours afterwards. The autopsy revealed typhoid ulcers in the ileum.

In addition to these cases Gaecelewitsch and Wanach report five more. The first of these was a man thirty-six years of age, who had had typhoid fever fifteen days. After eight days he had had bloody stools, violent pain in the belly followed by intense chills, vomiting and hiccough. The belly was swollen and the pain was general. The pulse was 120, the temperature febrile. An operation was performed two hours after the perforation. On exploring the intestines two perforations were found, one two centimeters in diameter, the other much smaller. Twenty centimeters of the intestine was resected, and death followed in about two hours.

At the autopsy ten ounces of fetid pus was found in the belly. The parietal and visceral peritoneum were covered with punctiform hemorrhages. The part of the intestine resected was thirty-seven centimeters from the caecum.

The second case was a man of twenty-four years who had been ill some time with typical typhoid fever. Seven days after entrance into the hospital he was seized with violent chills and fever, and all the symptoms of perforative peritonitis. The operation was done seventeen hours after the accident,

ether being given after a preliminary injection of cocaine. Perforation of the intestine was found. The mesenteric glands were enlarged and were adherent to the intestine in places. Thirty centimeters of the intestine was resected. Death occurred in six hours after the operation. The autopsy revealed profound typhoid ulceration at the lower extremity of the ileum. There were also signs of catarrhal pneumonia.

The third case was in a young man of nineteen, who had been sick five days. His fever was high and he had bloody stools. Four weeks after his entrance into the hospital he had perforation of the intestine. His condition remained grave, and on opening the peritoneal cavity it was found to be filled with bloody fluid and there were intestinal adhesions. Death occurred in three days. Again the autopsy revealed perforation and ulceration.

A man of twenty-seven presented mild symptoms of typhoid fever. Six days after his entrance he was seized with violent pain in the belly and with chills and sweating. There was also meteorism. Twenty-four hours after these symptoms the operation was performed. Again the belly was found filled with sero-purulent fluid. Thirty centimeters of the intestine was removed and contained four ulcers. Notwithstanding injections of saline solution the patient died eight hours after operation. Again the autopsy confirmed diagnosis.

In the fifth case a man of twenty-nine entered on the seventh day of typhoid fever; six days later violent pain in the caecal region came on with moderate fever. Surgical intervention took place thirteen hours after the accident. The abdominal cavity was filled with serous fluid. The walls of the intestine were edematous. Resection was performed. Death occurred in three days. The autopsy revealed the characteristic lesions and pneumonia of both bases of the lungs. Altogether these authors quote seventy-one instances of perforation in the course of typhoid fever, with seventeen recoveries. The number of deaths in operation for perforative peritonitis in typhoid is necessarily high.

In regard to the time for intervention it is

evident that much depends upon the promptness with which the surgeon proceeds to the relief of his patient, and it would seem that good results are apt to follow only in those cases in which the intervention is immediate or where nature has protected the peritoneum by inflammatory exudations which cause a limited peritonitis. In regard to the anesthetics which may be used in these cases, these two Russian surgeons believe that either chloroform or ether is satisfactory, provided the myocardium, the lungs, the liver, are in fair condition. In other instances they think that mixed anesthesia is well. They produce local anesthesia by cocaine and find that smaller doses of chloroform and ether are needed under these circumstances. Washing out of the peritoneal cavity in these cases is of the greatest possible importance, normal saline solution being employed.—The Therapeutic Gazette.

#### LATEST ADVANCE IN THE TREATMENT OF GONORRHEA.

Dr. M. Krot szynier.

Some four or five years ago, I wrote, in a paper dealing with a similar matter, "There is hardly a subject which has been so extensively discussed and written about as chronic Gonorrhœa, and yet, I might be justified in stating that there is hardly an ailment appearing in our every day practice where so many errors in diagnosis and treatment are made."

Since that time, our diagnostic apparatus has been greatly enlarged, and thus, stricter and more accurate indications have been devised for the rational treatment of this malady. The most important means to arrive at the correct diagnosis are briefly:

1—The two, or three glass methods of examining the urine.

2—The microscope.

3—The button sound.

4—The urethroscope.

5—A very valuable addition will be found in the digital palpitation of the prostate gland and seminal vesicles with subsequent microscopical examination of the expressed prostatic, or seminal fluid.

The microscope will prove whether we

have to deal with a gonorrhœal discharge (gonococci and pus cells) or the so-called aseptic catarrh (mostly epithelial cells, a few pus cells, absence of gonococci.) It will also prove whether the process is in the beginning, on the climax of its intensity, or already on the decline. Of particular value is the examination of the prostatic secretion.

It has been accentuated by various authors, and myself, that the presence of pus cells in masses indicates an inflamed condition of the prostate and the surrounding tissues.

The button sound will prove to be very valuable in demonstrating infiltrations of the urethral wall. It has been proven that these infiltrations are the seats of nests of gonococci, and the cause of recurrent outbreaks of urethral discharges containing gonococci. No specific urethritis is to be considered cured unless these infiltrations have been removed.

The most marked progress in the treatment of gonorrhœa has been seen in the mechano-therapy. Oberlander, of Dresden, has introduced this mechanical method upon an entirely scientific basis. The results obtained have been highly satisfactory. Oberlander, as well as Kollmann, have introduced a number of instruments, which have proven very valuable, and, by the use of which, cures are effected in which, until a short time ago, seemed refractory to all treatment.

In the treatment of acute gonorrhœa a few points have to be observed. The injections must be in the beginning, as weak as possible. The quantity injected must not be too large. Injections must be made slowly, and if possible, a pressure exercised upon the bulb, in order to prevent the fluid from flowing into the posterior urethra, and thus spreading the infectious material.

An enormous quantity of remedies have been recommended for the cure of acute gonorrhœa. I think the value of all of them is about equal, as far as they produce an astringent effect upon the mucous membrane. I have generally had very satisfactory results with the formula of Ricord, of Paris, a combination of zinc sulphate and lead acetate.

It is the general belief that the so-called "chronic" gonorrhœa is always limited to the posterior urethra. But a great many cases show a chronic infection of the anterior urethra. The diagnosis may be safely made with the aid of the urethroscope, which will show the diseased mucous membrane, characterized by glandular and peri-glandular infiltrations. Of all the urethroscopes in use, the most preferable is that devised by Nitze and Oberlander, in which, the light is produced inside of the urethra, right near the diseased area. Since the construction of this apparatus, urethroscopy may really be considered a valuable and trustworthy method for diagnostic and therapeutical purposes.

As soon as we have diagnosed the anterior urethritis as caused by deep-seated glandular infiltrations, we will find a safe method of removing them, in methodically dilating the diseased part of the urethra with Kollmann's dilator, and, afterwards, applying an astringent, or antiseptic remedy, which, now, will carry its effect into the infected submucosa and even deeper, to the corpus cavernosum. Here, also, we will find irrigations of the urethra of great value in order to wash away all infectious material which has been loosened by the energetic dilations.

Here is the place to add a few remarks concerning the irrigation of the urethra as first introduced into practice by Janet, of Paris. This is, undoubtedly, a very valuable therapeutical means, if applied correctly, and at the proper time. From a large experience covering a period of four or five years, I am ready to say that the irrigations of permanganate should not be used in the acute forms of the malady, as the danger of generalizing the process is too great. On the other hand, it gives, undoubtedly, excellent results in all cases of subacute gonorrhœa where the posterior urethra has been invaded. It is essential to close the meatus with a piece of cotton after irrigation in order to keep the urethra clean. It is also impossible to adhere to the heroic methods of Janet, as described by him in various publications, as the patients in private practice will, as a rule, not submit to frequent the doctor's office two or three times daily for a

simple gonorrhœa. I invariably irrigate once a day, and do not see the necessity of irrigating oftener. Ten to twelve irrigations, as a rule, are sufficient to produce a cure.

In chronic cases, of course, with deeper-seated infiltrations, the irrigations will only work satisfactorily after an energetic dilatation, and have to be repeated over a long period of time, until the urethroscope convinces us that the inflamed condition of the mucosa and submucosa has entirely abated.

Now and then, lately, excellent results have been published with the irrigation method as a means of shortening an attack of acute gonorrhœa, or rather of aborting the disease. I would not advise this method of treatment for such a purpose in private practice for fear of complicating a process absolutely limited to the anterior urethra. The more experience one gets, and the older one grows in treating urethral or other genito-urinary diseases, the more one is prone to adhere to the old maxim "Nil nocere."

Every physician dealing with gonorrhœa will come across some very stubborn cases, which, in spite of most careful and energetic treatment, carried over a long period of time, will not yield. Here it is advisable to give the tortured urethra a few months rest, and then to start in treatment again, which, occasionally, will be followed, under such conditions, with better results than before.

In these cases we generally have to consider that the deeper seated appendages of the urethra are the receptacles of diseased material. We can reach the prostate and the seminal vesicles from the rectum and express their secretions by systematic massage every three days, for from two to five minutes. Some authors have devised instruments in order to reach the upper edge of the prostate and the vesicles above them. In my experience, the index finger is the best instrument, and, as a rule, long enough to reach the organ in question. It is, of course, a tedious manipulation, and tries the endurance more of the physician than of the patient. But whoever has noticed how these organs, inflamed and indurated at the beginning of the treatment, offering to the touch of the finger irregular surfaces, here soft, there hard, on one side bulging out, on

the other side shrinking in, here painful to the least touch, there absolutely painless even on hard pressure; whoever has noticed how these organs will gradually return to a more normal condition, producing, in time, a less inflammatory material, will gladly take upon himself the inconvenience of a procedure, which, for the majority of these posterior gonorrhoeal affections is the only one that offers the hope of an ultimate cure.

I must not forget to add that a prostate, once infected, will generally show masses of pus cells even if all objective and subjective symptoms have disappeared for years. Later investigations will have to show whether the secretions of a previously infected gland will, after a long time, produce a microscopic picture which approaches the normal.

I wish to add a few remarks upon my experiences with new drugs introduced into the treatment of gonorrhoea, viz: the protargol. The market lately has been flooded with remedial agents, of which every one has been claimed by its discoverer to be the panacea against all gonorrhoeal affections. In the last five years, at least five different remedies have been tested by all eminent genito-urinary specialists, only to be outshone by some new discovery. One of the latest in this line (a later one, the "Largin," has been discovered and glowing results published) is the protargol. I was asked to test the value of this remedy some months ago, and wish to briefly report my results.

I have treated 57 acute, 23 subacute and quite a number of chronic cases with the remedy, and will agree with Neisser, of Breslau, in the statement that the remedy seems to remove the gonococci, as a rule, a little quicker than the other remedies do, but I have not convinced myself that the clinical symptoms of the malady are alleviated sooner. It seems to irritate, in concentrated solutions, to a great extent. Its value in subacute and chronic cases is, to say the least, questionable. I consider that, at present, the nitrate of silver is of unsurpassed value for chronic cases. Taking all in all, it may be said that the protargol is a valuable addition to our therapeutical means in acute cases. Glowing results, as published by Ruggles, have not been verified either by

other reliable authorities or by myself.—Pacific Record.

#### THE SPITTING OF BLOOD IN TUBERCULOUS SUBJECTS.

Few symptoms are so alarming, either to the laity or the profession, as that of hemoptysis or the spitting of blood. This is particularly the case when the loss of blood is considerable. It must be understood that this is some form of hemorrhage of the larynx, trachea, bronchi or the lungs, and is apt to occur in the more advanced stages of tuberculosis. It frequently, however, may occur in children at puberty who previous to that time have been habitually subject to bleeding from the nose, and in such cases it is the starting point of pulmonary tuberculosis, instead of a symptom of its approaching unfavorable termination. This fact has not been generally recognized, the opinion being prevalent that where there is spitting of blood some form of tuberculosis must already exist, even if there are no discoverable signs of the disease.

Here is a point in diagnosis that is of serious import to the treatment. If the hemorrhage is due especially to some form of tuberculosis, latent or developed, the treatment must of a necessity be directed toward the specific germ producing the condition. But there exists in other states than that of the typical hemophiliac a condition of fragility of the vessel walls disproportioned to the degree of blood pressure, and this may result in hemorrhages, slight or great, according to the immediate cause of the symptom. In such cases other constitutional measures are indicated, and, indeed, sometimes other immediate remedies will produce better results.

In tuberculous patients, hemorrhage of this nature, unless excessive, does not affect the prognosis to any marked degree, the length of life being about the same. The chief danger is that the patient may become exsanguinated through excessive loss of blood, and hence may die of immediate exhaustion, or that he may be actually suffocated by the on-rush of the

vital fluid. Sometimes the resultant anemia may be the ultimate cause of death. This is more apt to be the case when the patient is subject to frequently-recurring light hemorrhages, to which he becomes so accustomed that he does not pay the proper attention to his condition.

One of the most important requisites in meeting the condition, no matter what the cause, is the possession of a "level head" by the medical attendant. When the hemorrhage is severe there is every appearance of immediately-approaching death, and there is often extreme excitement both on the part of the sufferer and of his attendants, each acting and reacting upon the other until the worst possible conditions are produced, two hemorrhages often following in quick succession. Anything that tends to increase the excitement and alarm of the patient will necessarily increase arterial pressure and predispose to a recurrence, and the excitement may thus prove immediately disastrous.

In such a scene a cool and clear-headed physician who will act with calm deliberation is invaluable. A hasty, nervous man has no business in a sick room of this kind. The first measure is to calm the patient and restore to him some degree of confidence. When such a state of mind is induced it is ample time for more energetic measures. Sometimes this condition may be produced by the mere personal magnetism of the attendant; sometimes some therapeutic measure is necessary to give the idea that all possible is being done immediately; but whatever means may be used it is necessary that the mental equilibrium of the patient be restored. He will then be in a condition to be benefited by whatever may be done.

First of all, clear the room of all save the necessary attendants. Be rigorous on this point, and choose as your assistant an optimist if at all possible. Put your patient to bed, and keep him quiet. Tell him he is not going to bleed to death, and that you are not at all frightened. It is well to begin at first with some familiar

practical remedy like common table salt. Call for this and give your patient a full tablespoonful, telling him to swallow it at once with as little water as is absolutely necessary to wash it down. Keep him quiet a few moments and then place an ice-bag on his chest, and let him swallow small pieces of ice. Tell him there will probably be another hemorrhage in a few hours. This will steady him and probably prevent harmful excitement and loss of confidence in you and your treatment should hemorrhage occur. Make a solution of one grain of atropin in an ounce of pure water, and give of this five to eight drops every three hours until the hemorrhage has absolutely ceased. If there is cough, give minute doses of some form of opium, preferably Dover's powder, every two or three hours. A single grain of the powder will generally be sufficient for a dose.

If the pulse is excited and strong, veratrin is indicated, digitalis being the indication for the opposite condition. If there is great dyspnea with danger of suffocation, withdraw the clotted blood from the throat and larynx, and give champagne in small quantities. Fever is often best met by five-grain doses of quinine every three or four hours, but this must be used with caution. Fluid extract of ergot in doses of one drachm every hour is claimed to be of excellent avail in cases where there is not great vascular tension, but this drug has its chief effect upon the uterus, and atropin will meet the condition under consideration far better in hemorrhage from the lungs.

Make no examination of your patient by percussion or in any other way that will require movement or be likely to break down clots and bring on a renewal of the hemorrhage. It is nearly always almost impossible to find the source of a hemorrhage, and after all, the source is not a matter of crucial importance.

The patient should remain in bed at least a week after all indication of hemorrhage has ceased, and so soon as he can leave his bed the question of change of climate should be considered. This be-

cause, although the occurrence of hemorrhage does not necessarily denote the existence of lung lesion, it may show the predisposition to phthisis. The patient should be advised to go first to an elevation of about 2,000 feet, and then gradually work northward to higher elevations.

Particular attention to the dietary is necessary. Food should be taken of the most nutritious character in concentrated form and at frequent intervals. All bulky foods, of no matter what kind, are to be strictly forbidden.

Yet, to return to the keynote of the treatment, this is after all the inspiring of confidence in yourself and in the patient. All therapeutic measures are of an "assisting" nature, and largely depend for their effects upon the mental attitude of the patient. Therefore, keep cool and be cheerful, but above all, keep cool.—Monthly Retrospect.

### EVOLUTION OF SCIENTIFIC MEDICINE.

By Louis Faugeres Bishop, A.M., M.D.

The fact cannot longer be ignored that great changes have taken place in the economic relations between physicians and the public. The relation of physicians to the community has been profoundly modified by the general progress of knowledge and the extension of science and learning to so many fields of human activity. The number of professions in the true sense of the word has been enormously extended. The management of special commercial enterprises, such as railroads, telegraphs, financial corporations, and factories, is no longer entrusted to chance employees, who have acquired skill merely through experience, but are conducted by persons specially trained in engineering and forms of business. Professional training has become so diversified that the physician finds himself only one of a great many who are set apart to do a particular work because of special education. In the beginning the trades and business were far removed from science and systematic improvement that comes through development along the lines of exact observation and inductive reasoning.

Medicine also was involved in superstition and supported by authority rather than reason. As time has gone on the conduct of all human affairs—commercial, social, and even religious—has come under the dominion of the scientific tendency of the age that leads to simplification of method and organization of effort. At the same time medicine has thrown off superstition, secrecy, and the reliance upon authority. So the public at large, and physicians as a class, have come near together, and the physician finds himself one of a large number of specialists and subservient to much the same laws as the others. As a labourer, he must find a market, like his friend the electric engineer and the rest, and must be governed by the same laws of fitness, supply and demand. Pressure of circumstances will compel him more and more to conduct the business side of his work in conformity with scientific business methods. In fact, to be unbusinesslike is to controvert the order of the just relations of man to man. Business in its best development is more highly moral than many a system of theology.

A great disturbing element in the business relation of physicians is philanthropy. The physician has more opportunities than others to exercise this faculty, and he also must be acknowledged as having more opportunities as an individual for gain by the wrongful exercise of the privilege of gratuitous service. He benefits himself but injures the business possibilities of other members of his profession. The same selfish principle is seen in the commercial world when large departmental stores sell without profit a class of merchandise, such as groceries, that they do not care to handle except to make the crowds come to their bazaar, but which same business represents the means of livelihood of a large number of small shopkeepers. In this way, for the sake of prestige and experience, the older physician may injure younger men. This is the hospital and dispensary abuse. But, fortunately, philanthropy has not escaped the modern scientific tendency, and it is recognised as a socialistic fact that charity must be controlled by fixed principles and not left solely to the impulses of the emotions. Or-

ganisation cannot long be deferred. Philanthropy is seeking more and more the guidance of principles and facts developed by the scientific method of observation and experiment.

It is certainly true that a physician can no longer even practice without taking his more intelligent patients into his confidence. A smattering of medical knowledge has become a part of a general education, just as some mathematics, astronomy, geography, &c., are a part of the mental furniture of the average thinking and reading man. The dignity of the profession is well maintained when patients are told that a knowledge of medical facts is common property, that there is some difference in the power of different men to observe symptoms, but that the great difference between physicians and between the physician and the layman is in the trained judgement that determines the relative importance of facts and the quantity, time, and character of treatment. Observe the really great physician at his work and you will find him studying his patient with tremendous intentness, observing and weighing every symptom, summoning for consideration one plan of treatment and another, considering the applicability of one drug and another, and finally, frequently enough not interfering in any way with the satisfactory course of a self-limited disease.

This picture is one of tremendous reserve power, that is the product of a trained mind and a sound judgement. Very different is it from the picture of the small minded man or the charlatan, who fires at every mark in the shape of a symptom, who grasps feebly at every therapeutic suggestion, who is too short-sighted to see the limits of his own power. The former physician has far more real power than the latter, and when the emergency arises will not neglect for a moment the necessary use of remedies and measures that would be entirely beyond the grasp of the weaker intellect. It is to train the public to believe in medicine as a science and to believe in the value of knowledge, training, and judgement, that is the duty of the profession to itself, and the only hope of saving to the profession of medicine the dignity of the past.

The modern school of scientific medicine relies for its recognition and support upon a public educated in modern philosophy, a public dominated by the scientific spirit of a scientific age. It claims an advantage that medical knowledge should be open to any curious seeker, and that many medical facts should be of the common knowledge of the people. The public has already acquired that little knowledge that is so dangerous. It will not give it up. Our only salvation is to go boldly forward and educate the masses to a point where they themselves can discriminate between knowledge and imposition. The enemies of medicine have already entered upon a flank movement, and the newspapers, in America particularly, are filled with advertisements of articles, some of which assume the names of great discoverers. This movement was only to be expected, and must be met, as I said before, by training, so that the people shall be able to discriminate between science and fraud. As time goes on there will be fewer and fewer men who can be called great because they are conspicuous above their fellows, not because of the inferiority of men of the present day, but because the average of attainment has been so advanced that it is more difficult for any one to become pre-eminent. The Academy of Medicine has played its part in justifying medical knowledge and disseminating medical truth, but it cannot rest on its oars. The conclusions of the discussions of yesterday have become the actual practice of to-day, and it must move on constantly to new fields, or must re-cultivate old fields that for a time have lain fallow. Medical truth can never be attained, but must be constantly sought.

It would seem that unconsciously, and with many forebodings of evil, the profession has worked up to a more scientific plane in the broadest sense of that term. In the process, as has ever been the case in progress, many old idols have been shattered and the discipline of newly recognised laws has had to be learned. A progress of knowledge and civilisation, as manifested in broader public education, in civil and political liberty, and in the highly organised business and social relations, has changed the profession in two



ways. The profession has been profoundly modified from within by the progress due to the introduction of the scientific method, and from without by the tremendous alteration of society at large, of which it forms a part. So let us meet in this section with the true scientific spirit, approaching all subjects with open minds, willing to receive knowledge from every source and whatever be the medium through which it comes. We appeal to you to bring to this section the results of your work, and we pledge you a fair hearing, kindly criticism, and, we trust, helpful suggestion. This work is designed to open a new field of practical medicine to the profession at large. It is designed to map out practical applications of chemistry to the daily work of physicians, and to encourage those with special knowledge to so clearly describe and define practical chemical reactions that they may be useful to the physician untrained in theoretical chemistry. —Medical Times.

#### SCIENCE AND LONGEVITY.

Science, we all know, is an exacting mistress, and those who follow her have few rewards beyond the joy of her service which is also the service of humanity. But if we may believe the eminent astronomer, Professor Holden, science offers to her votaries certain concrete advantages as well, notably its undoubted tendency to prolong the lives of her followers. Prof. Holden gives several reasons for this, but he neglects one which we venture to think most potent, namely, the habit of contemplation and detachment from petty mundane worries which scientific men share in common with men of letters and philosophers. The magnitude of their pursuits dwarfs the petty cares of daily life into insignificance, and here, as elsewhere, "it is worry that kills." Professor Holden says:—"It is not a little remarkable that men of science, astronomers among them, are particularly long-lived. The average longevity for men is about thirty-three years. Someone has had the patience to determine the average age of some seventeen hundred astronomers and mathematicians, and it turns out

to be sixty-four years. That is, astronomers live nearly twice as long as men in general. According to Quetelet, artists have an average life of fifty-nine years; literary men of sixty-five years; scientific men, of seventy-four years. We are here dealing with selected classes of persons, all of whom are longer-lived than the average, and among them men of science are pre-eminent. The statistics from astronomers are really noteworthy; of one thousand astronomers no less than five hundred and ninety-six lived to seventy years; two hundred and sixty from seventy to seventy-nine; one hundred and twenty-six from eighty to eighty-nine; fifteen from ninety to ninety-nine; three over one hundred. According to life insurance tables, out of one thousand persons who have reached the age of eighteen years, only fifty-six reach the age of seventy; but more than ten times that number of astronomers survive. It is not difficult to assign good reasons why men of science should, in general, live far longer than the average man, or longer than artists, for example. In general they are in possession of incomes which, though they may be small, are tolerably certain. Their lives are usually orderly and calm. Scientific controversy may make the blood run quicker sometimes; perhaps they are needed to counteract a tendency to too much contemplation. But I think no one can fail to be surprised at the foregoing statistics. If one desires to live long upon this earth he is likely to gain his end by following science as a profession."—Humanitarian.

#### PRIOR REMOVAL OF OVARIES GROUND FOR ANNULING MARRIAGE.

The exceedingly novel and important question was raised in the case of *Wendel vs. Wendel*, whether the husband is entitled to the annulment of a marriage contracted without knowledge on his part that his wife was physically incapable of conception as the result of a surgical operation, such as the removal of her ovaries, known to her, but concealed from him.

Section 1743 of the New York code of civil procedure provides that an action may be maintained to procure a judgment declaring a marriage contract void and annulling the marriage, among other causes existing at the time of marriage, where one of the parties was physically incapable of entering into the marriage state. In deciding the question presented under this provision, Mr. Justice Hirschberg, of the special term of the Supreme Court of New York, King's County, follows, in part, this line of reasoning: Was the defendant wife, at the time of the marriage, physically incapable of entering into the marriage state, within the meaning of the statute? The answer depends in great measure upon what are recognized by law as the objects and purposes of marriage. If sexual intercourse alone is so recognized then it must be conceded that the defendant in this case was physically capable. But the creation of a family is also regarded as one of the chief purposes of a matrimonial union, and it is difficult to see how an individual can be physically capable of performing the contract who has lost the organs essential to conception. The question is different from that presented by sterility or barrenness. It is well settled that a marriage will not be annulled for the mere barrenness of the wife. Not only is such a condition and its continuance difficult, if not impossible, to prove, but its existence, if established, may not be innate, but only peculiar to an inharmonious combination. In such cases, whether the power to conceive or to impregnate be at issue, the question of the condition and its permanency rests on hypothesis and speculation, and is practically beyond the plane of judicial scrutiny. Impotence in such cases is the sole and settled ground of nullity. Continuing, the judge says that it seems to him that the question is vitally distinct where the barrenness is absolute; is not a constitutional quality or a functional failure, but a physical incapacity, resulting from congenital malformation or the total loss of the organs of conception by disease or the surgeon's

knife. So he holds, December, 1897, that a person destitute of child-bearing organs is physically incapable of entering the marriage state. And it follows, he holds, that in concealing from the husband the fact and extent of her misfortune, the defendant in this case procured his consent to marry her by fraud, which constituted a good ground for divorce. But had the plaintiff married her with knowledge that the surgical operation performed on her involved the removal of her ovaries he would of course, be stopped from action because of her physical condition. The fact that in this case the prospective husband had asked whether she was physically and mentally capable of being a wife, and that the judge says that good faith required that she should have then disclosed the fact the surgical operation involved the removal of the ovaries, perhaps casts some doubt on whether the judge would have decided as to the fraud and divorce therefor as he did, though his reasoning set forth would seem to have required it, had not the inquiry been made of her.—*Jour. of Amer. Med. Asso.*

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Dr. Newsholme, Medical Officer of Health for Brighton, has forwarded to the Town Council a brief report on the subject of condensed separated milk, which is now extensively used for feeding infants. Dr. Newsholme points out this "food," which has been deprived of the constituents most important of all for the healthy growth of children, is probably the chief cause of rickets, and that the protection of the public against condensed separated milk, the character of which is not plainly defined on the labels, is of far reaching importance. Ten half-pound tins of condensed separated milk would be required to obtain the same amount of fat as in one pint of good new milk, and Dr. Newsholme recommends the Council to support the action of the Camberwell Vestry, who are asking the Government to introduce a short Bill requiring that condensed milk tins should bear a label plainly stating how much of the condensed milk it is necessary to use as the equivalent of a pint of new English milk.

## ORIGINAL ARTICLES.

## THE BLOOD IN DISEASE.

*(Continued.)*

By Dr. Gordon Bell, Bacteriologist to the Provincial Government of Manitoba.

The polynuclear leucocytes possess a nucleus which is generally horse shoe shaped or lobulated and even where there seems to be two or three distinct nuclei, a careful examination will often reveal the fact that they are connected by delicate threads. For this reason polymorphnuclear would be a better term.

The lymphocyte, which is practically the same cell that is found in adenoid tissue throughout the body, has a round, deeply staining nucleus with a very narrow ring of protoplasm surrounding it, which takes a purplish hue, when stained by the ordinary method.

The splenocyte is a larger cell than the preceding, the round nucleus staining less darkly, and being surrounded by a considerable zone of protoplasm.

The transitional form is practically identical with the splenocyte, only the nucleus shows one or two indentations, for which reason it was supposed to be an intermediate form between splenocyte and polynuclear leucocyte.

The eosinophile cell in normal blood are almost invariably polynuclear forms containing coarse granules which stain intensely with eosin.

Another distinguishing feature is that the protoplasm of the polynuclear form holds five granules, which from the fact that they stain with a neutral stain such as Ehrlich's triacid mixture, mentioned above, are called neutrophile granules.

All the mononuclear forms, lymphocytes, splenocytes, and transitional forms, have basophile granules that stain with a basic stain such as methylene blue.

In normal blood one never finds neutrop-

hile granules except in polynuclear cells, but in certain diseases one finds them in mononuclear forms, and to this pathological leucocyte the term Ehrlich's myelocyte is applied.

Likewise eosinophile granules are normally only found in polynuclear forms and when found in a mononuclear cell one has to deal with an eosinophile myelocyte, a cell that is pathognomonic of leukaemia, due to disease of bone marrow.

There also occurs in the different leukaemias a very large atypical cell which resembles a splenocyte more than any other, and to which the term cornil myelocyte has been applied.

The three pathological leucocytes are then,

I. Ehrlich's myelocyte, a mononuclear form whose protoplasm contains neutrophile granules.

II. Eosinophile myelocytes, mononuclear forms containing eosinophile granules.

III. Cornil myelocyte, large atypical splenocytes.

Normal blood contains about 7000 leucocytes to c.c.m., when 10,000 are found to the c.c.m. you have a leucocytosis, when less than 5000 a leukopenia.

## CROUPOUS PNEUMONIA.

In this disease, due to the pneumococcus, you have a marked increase in the fibrin of the blood, this can easily be made out by examining a fresh preparation, when after a few minutes the coarse threads of fibrin can be seen radiating out from little heaps of granules, the remains of the hæmatoblasts.

You have also a strong leucocytosis, particularly of the polynuclear forms, and the greater this leucocytosis is the more favorable the prognosis.

It was with this in view that Pilocarpine was suggested as a remedy in this disease, it having the power of producing an artificial leucocytosis.

Another interesting fact is that the eosin-

ophile cells almost entirely disappear from the circulation until a few hours before the crisis.

In light cases the red blood cells are little affected, but in very severe courses the toxin destroys great numbers of them: and the hæmoglobin and its derivatives, are carried to the liver, and so clog it, that you get a hæmatogenous jaundice, a condition of the gravest import.

In the angina caused by pneumococcus, particularly that form where you have chills the same changes are found in the blood, while you have the chlorides of the urine diminishad, and not infrequently nephritis following it.

#### TYPHOID FEVER.

In this disease, strange to say, you generally get a leukopenia, and even when pneumonia supervenes you do not find a marked leucocytosis, though the polynuclear forms are relatively increased.

(Continued.)

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### EDITORIAL.

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The medical men of Ontario are acting in the interests of Dominion Registration, and from the minutes of a late meeting held in the University of Toronto, we gather that matters are sufficiently advanced to admit of an application at the coming session of Parliament for establishing it. Few could question the desirability of a Dominion Registration in the future, but, the doubt will arise whether this step, so far as the younger Provinces are concerned may not now be somewhat premature. It would certainly let loose in these sparsely settled portions of the Dominion the surplus medical men of the east. The North-West is showing immense vitality in the manufacture of Physicians and Surgeons, and the openings available for the practice of their profession are yearly becoming more restricted, how would

it be when the various colleges of eastern Canada poured their recently graduated men into Manitoba and the North-West. It is with difficulty bread and butter is secured by the medical man at the present time, but, with such competition as would undoubtedly arise if this system was now to come into force, the butter would probably become an unattainable luxury. The standard of examination in Manitoba Medical College has been very considerably advanced and the period of study lengthened, mainly with the object of not overloading the profession, and rendering it more difficult for those young men who give half the year to teaching and the other half to the acquirement of professional knowledge, which at the best must necessarily be largely of a theoretical character, studious, gifted with retentive memories they may pass even a brilliant examination, but beyond the parchment which licenses them to practice they are neither physicians or surgeons, they become so from practice and experience. With the general desire in all medical educating centres to raise the standard of preliminary education before entering the profession we were somewhat surprised to read in the Toronto World of Dec. 9th last, in the account of the University Meds dinner that one of the Professors stated that he considered the matriculation examination too stiff. It need not be added that this was received with every expression of approval by the students. We, however hope, and the general opinion tends that way, that the time is not far distant when M. D. and C. M. can only be attained after B. A. or M. A. has already been achieved. If Manitoba, the North-West and British Columbia are not prepared for the scheme of Dominion Registration, it is time they should be up and stirring in the matter, or they will awaken some day in the near future to find it law.

# Manitoba Medical College

WINNIPEG

IN AFFILIATION WITH THE UNIVERSITY OF MANITOBA.

Established 1883.

J. WILFRED GOOD, M.D., Dean.

Incorporated 1884.

W. A. B. HUTTON, M. D., Registrar.

Two First Year Scholarships of the value of \$20 and \$50, are open for competition at the close of each first session.

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W. A. B. HUTTON, M. D.

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- R. J. Justine Blanchard, M. B., C. M., Edinburgh University; member of the medical staff, Winnipeg General Hospital.  
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Professor of Surgery.  
Demonstrator of Anatomy.
- Gordon Bell, B. A., Toronto Univ.; M. D., C. M., Univ. Manitoba.  
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