

# Dominion Medical Monthly

And Ontario Medical Journal

Vol. XLVII.

TORONTO, NOVEMBER, 1916

No. 5

## Original Articles

### PRESIDENT'S ADDRESS BEFORE THE TORONTO ACADEMY OF MEDICINE

BY JOHN FERGUSON, M.A., M.D.

On the receipt of the cablegram from Col. Herbert A. Bruce, informing the secretary of the Academy that, owing to his military medical duties abroad demanding a prolonged absence from Toronto, he felt it to be his duty to resign the office of president, to which he was elected last spring, the Council placed upon me the responsibilities of the highest office in the gift of the Fellows. When I look back over the list of the distinguished gentlemen who have preceded me in the presidential chair, and recall their many gifts and talents of head and heart, and their brilliancy of expression, it will at once become apparent with what trepidations I appear before you on this occasion. This difficulty is brought to the point of positive discouragement when I think of what a wise and genial ruler my immediate predecessor, Dr. W. H. B. Aikins, on all occasions proved himself to be. You will, I know, be lenient in your criticisms; for I have not had the time, and I fear I have not the ability, to prepare a message worthy of the audience I see before me this evening. But I am here at your command, and, as Locksley said to Prince John, "Nevertheless, I will obey your pleasure," and, like Hubert in his turn, "A man can but do his best." Compared with the communication that Col. Bruce could have given us from the stirring events in Europe, anything coming from me must prove tame, indeed; and cannot but be regarded as *longo intervallo* from that to which you have been looking forward.

The Toronto Academy of Medicine is now entering upon its tenth session, and, although still quite young, has attained great strength, has struck its roots deep into a fertile soil, has reared its branches aloft to the gaze of all, and is yielding splendid fruitage in its social and scientific achievements. When the

Academy of Medicine speaks out on any public question its voice has weight, and is heard over a far-flung area, like that of Stentor. It is becoming more and more apparent that the objects of the Academy are not selfish or for class privileges, but truly altruistic and for the good of the public. This is well borne out by the origin of the Academy. It is now a little over nine years since the Ontario Library Association, the Toronto Medical Society, the Toronto Clinical Society and the Toronto Pathological Society realized the true meaning of the words of Longfellow that "All your strength is in your union." These various societies were doing excellent work; but all now recognize what a great step onwards was made when their union was effected under one name and for one great purpose—the creation of an *esprit de corps* in the medical profession which shall make *noblesse oblige* the supreme law. In all things we follow the injunction of Shakespeare, "Do as adversaries do in law, strive mightily, but eat and drink as friends." It is in this way that we hope to bring out the best that is in each of us; for we accept the truth of Browning's teaching in his Paracelsus that "Progress is the law of life." We have all been working with the fullest conviction that "outworn ideals are fading fast away," and that "new occasions teach new duties"; and so we have inscribed on our banner the words of Longfellow, "Act, act in the living present," in order that we may "build firmly on a wide and ample base."

The greatest of all incentives for a people are the noble deeds of the past and high ambitions for the future. As members of the medical profession we have a splendid history to look back upon, while a wide future of usefulness is opening up before us. As to our achievements, without being boastful, we can sing in the words of Milton that "Peace hath her victories no less renowned than war." Religious sects have many bitter persecutions to explain away, and nations, all down the vista of history, have waged wars of the most savage nature against each other; but nowhere in the past have acts of pillage, persecution or murder been charged against the medical profession. It has ever stood for the rights of man, for his social advancement, for his physical welfare, and for his intellectual elevation. The medical profession has ever been feeding the serpent of the Temple of Hygeia that it might remain appeased and spare the people. To all races and creeds we have ever extended the olive branch and taken with us the white-winged dove of goodwill. Mythically descended from Apollo, the sun god, through Æsculapius, the medical profession has always been, like that ancient deity, afford-

ing help and warding off evil. No wonder it is then that so great a writer as Carlyle could exclaim, "To the mitred bishop, nay even to the highest prince in the land, I might not make obeisance; but to the physician making his visit in the dark hours of the night, oftentimes without hope of reward, *en ecce!* to him I would doff my hat."

For more than two years national and international conditions in Europe have been undergoing transformation in the melting pot. Just as it was true in the palmy days of Julius Cæsar that all roads led to Rome, so is it true that all the evidences and arguments as to the causes of the present war lead to Berlin. There are now fourteen independent countries involved in this horrible war. These countries represent a total population of about nine hundred millions, or considerably more than half of the world's humanity. The most reliable estimates tell us that these fourteen countries have actually engaged in the war, or in course of training for it, not less than thirty million men. The death loss up to date lies somewhere between four and five millions, and we are told that much of the most violent fighting has yet to be recorded. We are told that in the over-run areas of Poland—and there is not much of it that has not been over-run—there is scarcely to be found a child under seven years of age: for all have perished from lack of food, shelter and raiment. Add to this the butcheries of Belgian and Serbian women and children, and the forcible abduction of French women, and still the ghastly tale is only beginning to be told! Could Canada, as part of the British Empire, have remained inactive as an interested bystander only? I think not. It is as true of this country as it was of ancient Rome in a great crisis:

My voice is still for war.

Gods! can a Roman senate long debate

Which of the two to choose, slavery or death!

And so our brave Canadian boys crossed the sea to do battle on the fields of France. In Shakespeare's King John, we find words that, though referring to an event now seven hundred years ago, can most fittingly be applied to our own men:

Be thou as lightning in the eyes of France;  
For ere thou canst report I will be there,  
The thunder of my cannon shall be heard;  
So hence! be thou the trumpet of our wrath.

On many a hard-fought field, demanding the maximum of courage and endurance, the officers and men of the Canadian ex-

peditionary force lived up to the Scriptural injunction—quit you like men, be strong. There was no eye that faltered, there was no heart that weakened, there was no muscle that trembled. Each one of our men could speak of himself in the words of Scott:

I have seen war's lightning flashing,  
 Seen the claymore with bayonet clashing,  
 Seen through red blood the war-horse dashing,  
 And scorned, amid the reeling strife,  
 To yield one step for death or life.

To this great struggle in behalf of liberty against brute force, and to the sufferings caused by it, the Fellows of the Academy have not proven indifferent. They have given freely of their best in professional, sympathetic and material aids. In the early days of the war the Academy donated one thousand dollars to the Patriotic Fund raised for the benefit of the wives and children of those enlisting. From that date also 195 of the Fellows have been giving their professional services, free of charge, to soldiers' families. The amount of attendance thus rendered has been very great, and has been highly appreciated. The Council of the Academy has granted the free use of one of its large rooms to an association of ladies, who meet in it almost daily and are engaged in the making up of supplies for the many Canadian hospitals overseas. Those of us who have seen these ladies at their work of love know how much they appreciate the privilege of meeting in the commodious room placed at their disposal. But the contributions of the Academy do not end here. No less than 88 Fellows have taken part in some capacity in the Army Medical Service. Some are in this country, some are attached to hospitals or regiments in Britain, some are doing their part in France, while others are at Saloniki with the University of Toronto Base Hospital. All of these have made great sacrifices for their King and country. One has already lost his life, and several have suffered impairment of health. To such of our Fellows as have suffered in health or sustained bereavements on account of the war we tender our fullest sympathy. Six of our members have lost a son at the battlefront. Ryerson, Primrose, Sneath, Macdonald, Nevitt and Machell did honor to their country, to the cause for which they fought, and to their parents. Each of them lived true to the words of Hector in "Troilus and Cressida":

Life every man holds dear; but the brave man  
 Holds honor far more precious dear than life.

They were of the genuine Spartan blood that felt they must bring back their swords with them victorious blades, or fall on the battlefield. *Libertas optima serum*, liberty is the best of things, has long been recognized by the world as a truth; but the more precious the jewel, the greater the price that must be paid for it, and history tells us that blood is the price that must be paid for this jewel.

But the Fellows have also contributed personally of their means. Already they have given \$2,300 for the purchase of supplies for the overseas Canadian hospitals. They have given \$1,196 in aid of the Belgian professors, and medical and surgical supplies and instruments to the value of over \$4,000 have been sent through the Red Cross to Belgian doctors. We have also contributed to the Patriotic Fund the handsome amount of at least \$5,000. To the Daughters of the Empire hospital fund, the Red Cross fund, and the equipment of the University of Toronto Base Hospital we have also been liberal givers, but there are no means of ascertaining the amounts. A grand total of over \$13,000. In connection with these efforts the services of Drs. H. B. Anderson, N. A. Powell and E. E. King cannot be too highly praised. They have truly lived up to the last mandate of Lord Nelson, "England expects every man to do his duty." Such performances find expression in Bailey's words:

We live in deeds, not years; in thoughts, not breaths;  
In feelings, not in figures on a dial.

Recalling our thoughts now from these war matters to local and domestic affairs, we find that the Academy has accomplished much in the few years that have elapsed since its organization. According to latest estimates, the value of the Academy's investments, cash on hand, library, and realty is creeping close up to \$50,000. The annual income from the fellowship fees and interest on investments is now about \$5,000 a year. There is in the main building and in the stackhouse an accumulation of over 10,000 volumes, many of which are quite rare. In the various classes of Fellowship there are at present 425 resident, 40 non-resident, 5 life, 5 honorary, and one corresponding. So far there are none in the benefactor class. A strenuous effort should be made by all to add to the lists of resident and non-resident Fellows. The fees so obtained would be a matter of consideration; but far more valuable would be the further strength that comes from growth in numbers. It is to be hoped that the day is not far distant when we shall be able to inscribe on our lists some names as benefactors.

Contrast these facts with the time in the history of the library when Dr. H. J. Hamilton, one of our past-presidents of the Academy, called upon a number of us for a small donation that urgent needs might be met and the work of the library be carried on. But "Hope, like the gleaming taper's light," led us on.

The grim reaper, Death, has claimed his quota of our Fellows. Dr. H. C. Burritt, a life Fellow, was full of years and honors, and had occupied a number of important offices as an expression of the goodwill of his professional brethren. Dr. Bruce Smith was one of our active Fellows, and always welcome at our social and scientific gatherings. He gave many of his most useful years to the bettering of the conditions in the asylums, hospitals, orphanages, charities and prisons of this province. His annual reports reveal what a keen interest he took in these institutions, and what a wide and hopeful view he held for the future. To his work the profession and the public owe much. And then his presence among us was like a benediction. Dr. Norman Yellowlees was but on the threshold of a promising career. He took a lively interest in the Academy's affairs, and offered his services to the army, going with the University of Toronto Base Hospital to Saloniki, where he met death by accidental drowning. To know Dr. Yellowlees was to admire his many good qualities. Still another able practitioner and upright associate was taken from our ranks by the death of Dr. Bartholomew E. McKenzie. Dr. B. E. McKenzie was favorably known throughout the country, and, indeed, was widely known in the United States as a specialist in the field of orthopedic surgery. Often have we heard his voice in clear and forceful tones enunciating his views on the topics of debate. The deaths of these Fellows bring to our minds the words of Horace: *Pallida mors aequa pulsat pede pauperum tabernas regnumque turres*; pale death comes with impartial footsteps to the homes of all. Emerson tells us that "the death of a dear friend, wife, brother, lover, which seemed nothing but privation, somewhat later assumes the aspect of a guide or genius to stimulate us in our way of life." We may well associate with the memories of these deceased Fellows the words of Oliver Wendell Holmes:

Take them, O Father, in immortal trust!  
Ashes to ashes, dust to kindred dust,  
Till the last angel rolls the stone away,  
And a new morn brings eternal day!

It is always a pleasure to learn of our Fellows receiving recognition for their services, and having honors conferred upon

them. In this connection we unite in extending to Dr. E. E. King our felicitations on his election to the presidency of the Council of the College of Physicians and Surgeons of Ontario. It is an honor that can come to but few, and we feel its dignity will lose nothing for having passed through his hands. It was also a matter of much pleasure to all of us to learn that the excellent services of Col. J. T. Fotheringham had met with the King's favor and that he had been rewarded with a C.M.G. This distinction Col. Fotheringham's two years of arduous performance of duty has worthily won. Quite recently Dr. H. A. Bruce has been made a full colonel, and has been given important duties to discharge in connection with Canadian hospitals in Britain, France, and in the Mediterranean region. Drs. Perry Goldsmith, H. E. Clutterbuck, Graham Chambers and Walter McKeown have also earned various promotions, and Col. J. A. Roberts has been several times mentioned in despatches. To all these we extend our best thanks for their devotion to the country's needs.

By a process of mind-reading I have taken a vote of the Fellows and have much pleasure in declaring it unanimously carried that I convey to Professors B. P. Watson, J. J. McKenzie, R. D. Rudolf and A. Primrose a hearty welcome back to our midst once more. There is no doubt but that, during their sojourn abroad, like the Earl of Westmoreland long ago, they learned enough of "the harsh and boisterous tongue of war."

And, now, as to the future, permit a few words. In the first place, every Fellow should make it a part of his regular creed to attend our meetings. The surest way to assist one's self is to assist others. The Council is greatly encouraged by good attendances at the stated and section meetings. The Fellows are also benefited and their interest quickened.

In the next place, every Fellow should become a recruiting officer for the Academy, and do what he can to induce his medical friends to join our ranks. Every medical practitioner in good standing in this city should take his place with us.

Then, further, we should be on the alert for donations of books and money. Every one of us has some influence if he will only use it. We have a library of 7,496 accessioned volumes, about 1,500 volumes in preparation for accessioning, and about 1,200 duplicate volumes to exchange for others as opportunity arises; but one of 50,000 volumes would not be too large. In addition to our books, there are over two hundred and fifty current journals and transactions on file in the reading room. Many of our Fellows allow books to be lost that should find a place on our

shelves. Fellows might also remember in their wills the Academy, and make a favorable direction with regard to their books; and, perhaps, also in the matter of some of their money. With nearly five hundred Fellows we should be able to induce some of our generous citizens to place the Academy on the list of their beneficiaries. If you do not cast out your hook and line you will catch no fish. Let us become disciples of Isaak Walton. There is fruit for the pulling and grain for the garnering. In Bailey's "Festus" we are told "We live not to ourselves, our work is life."

There is another topic on which I crave your indulgence for a few moments. The signs of the times point to some forthcoming medical legislation. It will be necessary for the Academy of Medicine to take its place on the watch-towers to guard the rights of the people. Several cults, claiming the privilege to treat the sick, have appeared before the commissioner appointed by the Ontario Government. The most important of these are the osteopaths, the chiropractors, the optometrists and the Christian scientists. These cults will no doubt seek some short cut to secure the legal right to treat and charge. The position which has always been held by the medical profession is that, if anyone wishes to be a dermatologist, an ophthalmologist, a neurologist, a pediatrician, an obstetrician, or a surgeon of a special sort, he must first pursue a full medical course of studies, and obtain the license of the College of Physicians and Surgeons. It has always been true that this is the irreducible minimum of training and learning that must be enforced before anyone secures the right to practise any specialty or system of treatment.

Dr. John Green, professor of ophthalmology in Washington University, St. Louis, defines optometry thus: "Optometry signified, in its older use, the measurement of the range of vision. With the attainment of broader and more accurate knowledge of the physiology and pathology of vision, quantitative methods have been applied to the investigation of other visual functions, and we now recognize, as parts of one general subject, the measurement (1) of the acuteness of the visual perception of form, (2) of the perception of light, (3) of the perception of colors, (4) of the extent and limitations of visual field, (5) of the accommodative and refractive states of the eye, and (6) of the position and movements of the eyeballs." Here one has clearly set forth part of the routine practice of the ophthalmologist. It would be just as logical to give a person a course of instruction on the skin and license him to practice dermatology, and call himself



a D.D of a sort, namely Doctor of Dermatology. This process could be carried to the *reductio ad absurdum* of having doctors graduated, after a few weeks' training, to treat each organ of the body separately.

The next false claimant is chiropraxy. Nelson's encyclopedia defines it thus: "Chiropractic, a system of therapeutic treatment for various diseases, through the adjusting of articulations of the human body, particularly those of the spine, with the object of relieving pressure or tension on nerve filaments. The operations are performed with the hands, no drugs being administered." Here we have a very crude form of manipulative treatment based on a wholly unscientific foundation. It is absolutely impossible to relieve any pressure that may be on a nerve by such manipulations. Any relief that may sometimes follow can only be experienced as the result of suggestion. A person may think he has some displacement of the spine when he has not. Much better would it be at once to graduate mesmerists, Braidists, Freudists and hypnotists and set them loose on a gullible public to perform all sorts of pranks along the line of suggestions, charging for these impostures under the guise that they constitute a new system of treatment.

Osteopathy is the next pseudo-system seeking recognition. Osteopathy was founded by Dr. Andrew Taylor Still in 1874. Dr. Still was an army surgeon during the Civil War. This means that he must have graduated before 1861, when the war broke out. From this one can readily imagine he would not be burdened with too much scientific knowledge. This is fully borne out by his four main laws of disease and treatment. These are:

1. "That a disturbed artery marks the beginning to an hour and minute when disease begins to sow its seeds of destruction in the human body. The rule of the artery must be absolute, universal and unobstructed or disease will be the result."

2. "All the remedies necessary to health exist in the human body. They can be administered by adjusting the body in such condition that the remedies may naturally associate themselves together."

3. "The cause can be found and does exist in the limited and excited action of the nerves only, which control the fluids of all parts of the body. All diseases are mere effects, the cause being a partial or complete failure of the nerves to properly conduct the fluids of life."

4. "That the system be named osteopathy, because the rela-

tions of all the body structures are determined by the skeletal framework, and this is the key to the processes of adjustment."

These propositions can be riddled in all directions. They are hopelessly "cribbed, cabined, coffined and confined." To grant a license to persons holding such views would be a crime on civilization. To make this still clearer, let me take a few statements from an article by Mason W. Pressly, one of the professors in the Philadelphia School of Osteopathy. Here they are:

1. The life is in the blood.
2. The normal flow of the blood is health.
3. Any obstruction to such flow is possible disease.
4. Removal of such obstruction is scientific cure.
5. The means of such removal are supplied by the body itself.
6. This supply determines the method of procedure.
7. This procedure must be natural.
8. Being natural, the results are permanent.

The foregoing statements on the blood, the cause of disease and its cure are followed by a number of others which are so remarkable we wish to give them publicity:

1. "The law of life and disease and death is within the body, not without it."
2. "The law of the organism should dominate the law of environment, and not be dominated by it."
3. "The body should assimilate the world to itself, and not be assimilated by the world."
4. "The principles of initiation and spontaneity are superior to the state of passivity, reaction and plasticity."
5. "The body is a process capable of action through its own potencies, rather than a product to be reacted upon by the formulations of the apothecary."
6. "As the body is autotoxic and may produce within itself worse pathological conditions than can be made without it, so it is also autotonic, and may reduce these pathological conditions."
7. "The body is auto-biological and auto-chemical, and can produce better formulations within its own laboratories than can be made in commercial laboratories, and so the body is auto-therapeutic."
8. "There are conditions of self-sufficient production, and equally, conditions of self-sufficient reduction in all the processes that tend to disease or health."

Here you have osteopathy in all its nakedness, exhibiting to view an erroneous physiology, a false pathology, and, withal, a most dangerous therapeutic, because founded upon wrong pre-

mises. It is only a system of manipulation indiscriminately applied. Here we have the old bonesetters, Swedish movement curers, and such like revived under the name of osteopathy.

With regard to Christian science let me quote a few statements from Mrs. Eddy's writings: "What you call neuralgia, I call an illusion"; "A Christian scientist never gives medicine, never recommends hygiene, never manipulates"; "My publications heal more sickness than the unconscientious student can begin to reach"; "Anatomy, physiology, treatises on health are the promoters of sickness and disease"; "It is morally wrong to examine the body in order to ascertain if we are in health." The late J. P. Sheraton, principal of Wycliffe College, wrote thus: "Christian scientists are disqualified by their principles and methods from bearing impartial and reliable testimony to the existence and character of disease. They are incompetent to diagnose, both from their want of knowledge and their repudiation of medical science; and by their self-interest and charlatanry they are disqualified as trustworthy witnesses." In a similar strain, I. M. Haldeman, D.D., pastor of First Baptist Church, New York, writes: "Turn from this thing which, calling itself Christian science, is neither scientific nor Christian, and, beneath its indecent defiance of science and its treacherous betrayal of Christ, conceals the face of antichrist and the form of Satan." Frederick W. Peabody, LL.B., of the Boston Bar, who had an unusually good opportunity of knowing the real truth about Christian science, because of his connection with litigation where this cult was involved, makes these startling statements: "The founder of this pretended religion, this bogus healing system, audaciously and irreligiously professing equality of character and of power with Jesus, has, throughout her whole long life, been in every particular precisely antithetical to Christ. Sordid, mercenary, unprincipled, the consuming passion of her life has been the accumulation of money, and she has stopped at no falsehood, no fraud and no greater wickedness that seemed to put her in the way of adding to her accumulations." This fearful indictment was made some time prior to Mrs. Eddy's death, when she had ample opportunity to deny it, but she was as silent as the grave. Again, Mr. Peabody states: "The truth is, Mrs. Eddy's miraculous cures are all frauds, every one of them, and the failure of attempting healings would prove them to be frauds, and she does not wish to discredit herself." This was also said during Mrs. Eddy's lifetime. Further, Mr. Peabody tells us: "I know a woman who was a successful healer for fifteen years, and as conscientious as any of them, and

she is now frank enough to say that she never healed anyone of any real disease or serious indisposition in all that time, and doesn't know of any other healer who did."

In the *New York Sun* for 16th December, 1898, Mrs. Eddy made this statement in a letter: "I challenge the world to disprove what I hereby declare. After my discovery of Christian science, I healed consumption in its last stages, that M.D.'s, by verdict of the stethoscope and the schools, declared incurable, the lungs being mostly consumed. I healed malignant tubercular diphtheria and carious bones that could be dented by the finger, saving them when the surgeon's instruments were lying on the table ready for their amputation. I have healed at one visit a cancer that had eaten the flesh off the neck as to expose the jugular vein so that it stood out like a cord." This declaration by Mrs. Eddy is a trump card with the Christian scientists. Just look at the brazen impudence of this challenge. She gave no names or addresses, and in this way escaped the investigation she seemed to invite. But this is in keeping with Mrs. Eddy's cunning and impudent methods in other things. But in the *New York Sun* for 1st January, 1899, Dr. Charles A. L. Reed, of Cincinnati, a well-known physician, published a challenge to Mrs. Eddy that he would furnish her with such cases as she said she had cured, and that, if she cured them, he would proclaim her power. Silence as deep as death rested on Mrs. Eddy's lips, and Dr. Reed never heard from her.

And this is the thing that seeks the legal right to treat people and charge for the same! Never has the medical profession seen born into existence a more hideous monster than Christian science when we speak of it as a healing cult. No chemistry, no anatomy, no physiology, no bacteriology, no diagnosis, no medicine, no hygiene, all, all a great nothing; for there is no matter, and all disease is an illusion, a mere myth; yet the Christian scientist wishes to treat this illusion, and charge for doing so! This is a dragon that the St. George of the medical profession must boldly encounter. We fight for truth, these various cults for error; but remember the words of Bryant:

Truth crushed to earth shall rise again;  
The eternal years of God are hers;  
But Error, wounded, writhes in pain,  
And dies amid her worshippers.

Optometry is only a small piece of ophthalmology, and this, in turn, only a portion of the whole field of a medical course.

Chiropractic and osteopathy are only portions of manipulation, and this again a very minor part of therapeutics in general. Christian science is only a phase of suggestive treatment, and founded on gross ignorance and greed at that. Contrast these abominations that seek recognition to diagnose and treat disease, and charge for this shoddy attention, with the medicine, and surgery, and science that are to be found in the war zones to-day, where sepsis is held under control and contagion and epidemics averted. Set alongside of this the teachings of Mrs. Eddy that "a Christian scientist never recommends hygiene," and then turn to the work of the American Red Cross in plague-stricken Serbia!

There is one Act on our statute book to which I desire to refer. The Workmen's Compensation Act does great injustice to the medical profession. While the Act was under consideration representatives from the profession, and especially from the Academy, pointed out very clearly in what way the Act should be framed in order to do fairly by the medical profession. These requests and suggestions were set aside in a most cavalier manner, and the Act in its present form became law. Since then this Academy, in conjunction with other medical bodies, has sought for reasonable amendments to the Act, but without meeting with much encouragement. Throughout this great province in all its public hospitals, orphanages, charities and homes for the care of the poor, and in the homes of the people, whenever and wherever the call comes for medical or surgical help for the poor, the medical profession at all hours of the day or night has responded, and without fee or thanks. On top of this immense service to the public, the Legislature of the province has imposed upon the practitioners another great responsibility in the carrying out of the Workmen's Compensation Act; and, shameful to tell it, has made no provision for payment when that responsibility has been honorably discharged. Were the Act for a pure charity, as in the case of the Hospital Act, it would be quite different; but this is a purely business and monetary Act, and there is absolutely no justification for not providing for a fair remuneration to the members of the medical profession, who may from time to time give valuable services to the injured coming within the meaning of the Act. But there must be an end to this sort of thing. Patient and long-suffering as the medical profession has always been, there will come a time when it will be its plain duty to resist an unjust Act. For us the words of Junius that "the subject who is truly loyal to the chief magistrate will neither advise nor

*consent* to arbitrary measures," must become a living reality. If the authorities will not amend the Act, then it may be necessary to refuse to give professional attendance upon the injured. This might seem harsh, but it may have to be the last court of appeal. It is to be hoped that those who can easily avert such a state arising will do so.

The Council very carefully considered a plan whereby a brief, but carefully-prepared biographical statement shall be placed on file concerning each Fellow. At the annual meeting in May last this was unanimously concurred in. During this session steps will be taken to put this important feature of the Academy's work in operation. It will not be long before this department will be thoroughly appreciated and supported by all.

In conclusion, I thank you, gentlemen, for the honor you have conferred upon me, and ask you one and all to bend your efforts towards the lengthening of our lists of Fellows, the adding greatly to our accumulation of books, the advancing of our scientific attainments, the gathering of funds for a commodious building, and the promotion of good fellowship—for "friendship is the wine of life." We should so live and labor," said Henry Ward Beecher, "that what came to us as seed may go to the next generation as blossom, and what came to us as blossom may go to them as fruit." This may seem a heavy contract, but the sound, though homely, philosophy of "'tis dogged as does it," will carry us to the winning post. As these objects are being gradually achieved we will all be ready to speak of the corner of Queen's Park and Grosvenor Street as Horace did when he thought of his beloved villa, "For me that portion of the earth smiles more sweetly than all others."

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Among others who attended the American Public Health Association meeting in Cincinnati, Oct. 24th, were Dr. F. Montizambert, C.M.G., Ottawa, Director-General of Public Health, and Dr. E. P. Lachapelle, Montreal; also Dr. Charles J. Hastings, M.O.H., Toronto.

Of the 437 patients discharged from the Laurentian Sanatorium, Province of Quebec, in the past eight years, 90 per cent. have been traced. Of that number living and well there are 52 per cent.; invalids, 17 per cent.; dead, 21 per cent.; untraced, 10 per cent. The institution treated 196 patients as against 129 for the previous hospital year. Civilian as well as military patients are received.

# Dominion Medical Monthly

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**Medicine:** Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.

**Surgery:** Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace, A. Scott, George Ewart Wilson.

**Obstetrics:** Arthur C. Hendrick.

**Pathology and Public Health.** John A. Amyot, Chas. J. C. O. Hastings, O. R. Mabee, Geo. Nasmyth.

**Dermatology:** George Elliott.

**Physiologic Therapeutics:** J. Harvey Todd.

**Psychiatry:** Ernest Jones, W. C. Herrman.

**Ophthalmology:** D. N. MacIennan, W. H. Lowry.

**Rhinology, Laryngology and Otolaryngology:** Geoffrey Boyd, Gilbert Royce

**Gynecology:** F. W. Marlow, W. B. Hendry.

**Genito-Urinary Surgery:** T. B. Richardson, W. Warner Jones.

**Anesthetics:** Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR.

Published on the 20th of each month for the succeeding month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 219 Spadina Road, Toronto, Canada.

Vol. XLVII.

TORONTO, NOVEMBER, 1916

No. 5

## COMMENT FROM MONTH TO MONTH

The Canadian Army Medical Services in England and France have attracted widespread attention on account of the special investigation and report of Colonel Herbert A. Bruce, Toronto. Colonel Bruce sailed for England during the past summer, commissioned by the Canadian Government, or the Department of Militia, to make a thorough and searching investigation into all matters pertaining to the wounded soldier. Associated with him on a Medical Board were men of experience and ability, such as Lt.-Colonel Walter McKeown, Toronto; Lt.-Colonel Wallace A. Scott, Toronto; Lt.-Colonel Wilson, Niagara Falls; and Captain Hunter, Winnipeg.

Report has it that Surgeon-General Carleton Jones, C.M.G., Director-General of the Canadian Medical Military Services, is returning to Ottawa, but it is not announced whether he has been recalled or has resigned. Added to this comes the announcement that Sir William Osler, who has been Honorary Adviser in connection with Canadian hospitals abroad, has resigned owing to sympathy with General Jones.

From the quotations from the report of Colonel Bruce, printed in the public press, efficiency of conduct and operation of hospitals has not been commensurate with the undoubted surgical ability

Canada has sent abroad. There has been apparent lack of co-ordination and concentration in the management, or administration—let the blame lie where it may—of the Canadian Army Medical Service.

Colonel Bruce is one of Canada's most eminent surgeons, and his long association with hospital work qualifies him to speak with great authority upon hospital and surgical matters. He has not been content to speak of mere generalities, but backs up his observations and statements with tangible evidence of stated facts which cannot be controverted.

On the other hand, Surgeon-General Jones has had long association with military affairs, and has always been looked upon as an expert in all matters pertaining to the C. A. M. C. It seems to be quite clear that, like many another man in times of great trial and stress, he has had far too much administrative work for one mere man. Had this been recognized, and hospital administration placed under some one with experience and capability, in that particular line, greater efficiency and conservation of wastage might have prevailed in the service.

Whatever the cause and wherever the blame lies, and without first-hand knowledge of prevalent conditions, it is gratifying to learn that, almost without exception, our Canadian medical men are heartily commended for their work, no matter in what particular sphere they have been called upon to do it.

Everybody wants to see the Canadian soldier well taken care of, not only when abroad, but as well upon his return to Canada. The country can never forget its debt of gratitude to her brave and gallant sons, of whom far too many have already made the supreme sacrifice upon the battlefields of Europe, and it is but a feeble tribute one can pay to those of our fellow-citizens who are suffering most for humanity and civilization, for king and country.

But in one respect there is great reason for congratulation, for out of 52,000 Canadian casualties, only 450 odd have died of sickness. A record to be proud of! A triumph for the internist! Glorious for preventive medicine!

So by all means let the surgical section be perfected in every way possible. The best in Canada will not be too good for this work.

But in the face of it all, our people are more industrious, more sober-minded, more optimistic, and above and over all, more determined that that diabolical despoiler of civilization, German militarism, must be, shall be utterly confounded, and finally and completely overthrown.



## THE DIRECT TRANSFUSION OF BLOOD: ITS VALUE IN HEMORRHAGE AND SHOCK IN THE TREATMENT OF THE WOUNDED IN WAR

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The direct transfusion of human blood from one individual to another is an operation of great antiquity, but in the history of medicine it has never been as extensively employed as it is to-day. From time to time transfusion of blood has been abandoned, largely because of technical difficulties in its performance, but of late years, as the result of the introduction of more perfect and less complex methods, the operation has become much more generally employed. Its value as a therapeutic measure in the treatment of many pathological conditions has in recent years been established on a scientific basis. Thus, it has proved of great service in the treatment of hemorrhage, shock, illuminating gas poisoning, and of more doubtful value in pernicious anemia and certain toxemias.

The writers will not review the observations which have been made, in recent medical literature, regarding the value of transfusion in the multitudinous conditions in which it has been used; we propose to restrict our observations to the value of direct transfusion of blood in the emergencies of military surgery. There may be some question as to its efficacy in many of the conditions in which it has been employed, but in hemorrhage and shock, more particularly in shock accompanied by hemorrhage, its value has been proved beyond a shadow of doubt. We may assert that we have no more efficient means at our command to save life in cases of severe hemorrhage than by the direct transfusion of human blood from one individual to another. This has been proved not only in traumatic hemorrhage (primary and secondary), but in hemorrhage from such conditions as gastric ulcer, typhoid ulcer, ruptured extra-uterine pregnancies, the hemorrhages of the new-born and in hemophilia.

If we enquire into facts which are known regarding the effect of introducing human blood into the vascular system of an individual suffering from hemorrhage, we realize the diffi-

culty and complexity of the problem involved in our effort to appreciate the full result of transfusion. As regards the transfused blood, we have no precise knowledge concerning the fate of the corpuscular elements nor of the plasma. The possibility of the harmful effect of lysins or agglutinins in the blood of the donor or recipient has been feared, but this has been greatly exaggerated. A large amount of clinical evidence has accumulated to warrant us in assuming that no serious harm is to be anticipated from such sources. The laboratory tests for hemolysis and agglutination may be carried out if time and facilities permit, but they are not necessary, and are by no means trustworthy. The laboratory findings in hemolysis, for example, have been found at times at variance with the actual results obtained in the living body. No fatal result has hitherto been reported from either hemolysis or agglutination.

The danger of the transmission of disease makes it essential we should enquire into the past record of the donor, particularly as to whether or not he has had syphilis.

The results of transfusion stand out prominently and are unquestionably of enormous value in the treatment of hemorrhage. These are, first, it increases the power of coagulation of the blood, and, second, it improves the local resistance of the tissues to infection. These facts have been recorded by a number of observers over a large series of cases, and have been shown in the most striking fashion in the cases of secondary hemorrhage which we have personally treated by transfusion. If we stopped there and claimed no more for transfusion, our contention in urging its employment in such cases would be justified. There are, however, other effects which are more difficult to analyse, and yet which we are warranted in believing are of great service. If we introduce, say, a litre of blood with all its constituent elements into the vascular system of an individual suffering from the direct effects of a severe hemorrhage, and if we have reason to believe the transfused blood takes on its normal function in the recipient, the ideal therapeutic measure has obviously been employed. This is admittedly a very complex problem, and we acknowledge our ground is not as sure in the matter of conclusive evidence as it is regarding the effect upon the coagulability of the blood and the increased resistance to infection. If, however, we employ all known tests after transfusion and find no evidence of hemolysis we have strong ground for assuming that the donor's blood, in all its elements, circulates and functions in the recipient. If, for example, we find no evidence of hemoglobin in the urine, we

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certainly have no lacking of the red cells in the circulating blood. The possibility of phagocytic destruction of red cells in the liver cannot so readily be disposed of, and we have no means of determining this factor. The blood count does not help us to any extent, because we find, for example, that if a litre of blood is transfused into a patient who is exsanguinated the blood count is not necessarily altered, in spite of the fact that the red cells are low in our patient at the time. Thus, recently a patient with a red count of 3,000,000, received a litre of blood from a donor with a red count of 5,000,000. Two hours subsequently the red cells in the recipient were still 3,000,000, but his color was markedly improved, and his blood pressure and pulse were maintained at normal. Obviously, the introduction of the more concentrated blood resulted in an osmosis which quickly restored the former equilibrium and resulted in a dilution of the mixed blood now circulating. There was no evidence of hemolysis, and the result of transfusion was to increase probably by one-third or more the amount of blood circulating in his vascular system. The result was vast improvement in his general condition, with cessation of hemorrhage and rapid healing of his wound.

Cases illustrating the beneficial effect of the direct transfusion of human blood in hemorrhage have come under the observation of each of us. Unfortunately, one's clinical notes of cases occurring at home are not available for the record of complete details in this paper, but the main facts regarding two such may be cited. A lad, 16 years of age, had a deep cut inflicted by an axe, in the calf of the leg. The wound suppurated and secondary hemorrhage from the posterior tibial artery occurred. He was sent to hospital, and in the clinic the artery was tied high in the wound; hemorrhage recurring, the vessel was ligatured through a fresh incision at the lower end of the popliteal space. Subsequently the wound continued to suppurate, the pulse was rapid and thready, and he steadily lost ground. Direct transfusion of blood was undertaken, the lad's brother acted as donor, and by means of Crile's cannulae the operation was performed and a considerable amount of blood was transfused. Towards the end of the operation the lad spontaneously expressed himself as feeling better, his pulse was no longer rapid, and the blood pressure improved. Subsequently the wound became healthy, no further hemorrhage occurred, and he made an uninterrupted recovery. Another instance in the clinic of one of us was the case of a girl exsan-

guinated by repeated hemorrhages from a gastric ulcer. Her physician considered her condition most critical, she was blanched and had a rapid pulse, low blood pressure and sighing respirations with restlessness. After transfusion she immediately improved, and made an uninterrupted recovery with no recurrence of hemorrhage. Several other instances might be quoted from our experience at home were our notes available. Two examples from our hospital in the field at Salonika may be noted in some detail.

The first is that of a corporal, *æt.* 42, who was admitted to No. 4 Canadian General Hospital on Dec. 17th, 1915. He had been knocked down by a motor lorry, the wheel passing over his left thigh and left arm. There was a compound comminuted fracture of the upper third of the femur and a compound fracture of the humerus above the insertion of the deltoid muscle. In both arm and thigh, torn muscle protruded from the wounds which were of a "bursting" character, and in the thigh on palpation the muscles seemed to be extensively torn away from their pelvic attachments. He had lost a great deal of blood and was in a condition of profound shock. The fractured limbs were secured on splints, with as efficient reduction as his condition would permit. It was impossible to administer a general anesthetic. Morphia was administered to relieve his pain and combat shock. He rallied somewhat but remained for some days in a critical state in spite of the administration of normal saline solution. On Christmas day (one week after admission) his condition seemed desperate and it was determined to transfuse human blood. A donor was easily found and we transfused 815 cc. of blood. The patient expressed himself as feeling better; he said he felt "warm," his pallid lips became red and his condition of utter exhaustion gave place to one of comparative comfort. His pulse became slow, regular and full. During the next few days improvement in his general condition was maintained. Unfortunately the record of the blood picture before transfusion has been mislaid, but subsequently the record is as follows:

Dec. 26.	Hemoglobin 36 per cent.	R.B. cells 3,050,000.
Dec. 29.	Hemoglobin 40 per cent.	R.B. cells 3,700,000.
Jan. 20.	Hemoglobin 41 per cent.	R.B. cells 3,660,000.
Feb. 11.	Hemoglobin 58 per cent.	R.B. cells 4,460,000.

The urine was tested for hemoglobin for a few days after the transfusion with negative results.