

FROM THE ARCHIVES

The Future of Surgery

H.K. MacDonald MD CM FRCS

In commemoration of the 75th anniversary of the Dalhousie Medical Journal's founding, we are pleased to present a series of articles from the journal's storied past. We kick off this series with a visionary piece from our first issue, as it appeared in 1936.

Since Lister enunciated the principles of antiseptic Surgery which developed into Aseptic Surgery, so much has been accomplished in Surgical progress that to write it as a prophesy in the year 1890, let us say, would call forth condemnation of its author as a foolish romancer. The memory of what has happened since my graduation from McGill gives me courage to draw upon my imagination for the future. I have seen this Art develop from an uncouth Caliban into a polished citizen of the world, the one rough, uncertain undependable and unfinished, the other well regulated and calculated - nearly a finished product. But not quite a finished product, for I firmly believe that with the perfection attained in technique the scope of surgery will continue to widen its bounds.

What will the attitude of the University and its Medical school be so far as the future of Surgery is concerned? As you are aware, many of our present day medical colleges, not all, confer the degree of M.D., C.M. on a worthy applicant, but the tendency is the change and I believe that in the near future these medical schools will only confer M.D. and no degree will be conferred in Surgery until some years after graduation, or until such time as the applicant holding the M.D. degree will have shown that he has made himself proficient in the Art and Science of Surgery by a prescribed course of post graduate study, both theoretical and practical, and a degree such as Bachelor of Surgery is conferred. The aim of the Medical School of the future, so far as a thorough grounding in surgical principles and diagnosis is concerned, will continue to be as in the past, but they will discourage the view, that because an individual has spent a prescribed number of years in perfecting his ground work that he is qualified to operate, except possibly to relieve emergent surgical conditions. With the conferring of the M.D. degree the school of the future will emphasize the importance to a greater degree than in the past that its graduates be able to recognize and differentiate surgical conditions,

and having done so, then to employ the best surgical skill available.

Improved anaesthesia has been a remarkable aid to modern surgery. Perhaps the perfect anaesthetic has yet to be found, but such a variety is now available that the condition is rare which does not permit one or the other of these to be employed with resulting freedom from pain and comparative safety to the patient. Improved methods in spinal anaesthesia as well as in local anaesthesia permit ideal conditions for work without loss of consciousness on the part of the patient. Research in the field is active and further developments are to be looked for. But good anaesthetics call for good anaesthetists. Every year it becomes plainer that anaesthesia is becoming a specialty which will ultimately embrace all varieties and methods, even to spinal and local anaesthesia.

As I have remarked above, while our technique is not perfect it is fairly well developed to cover the present field of surgical endeavors. Our means for securing asepsis are perfect providing the human element applying them is also perfect, instruments are available for every known surgical procedure and now, more simple forms are being devised each year. Before we are called upon to predict changes in instruments, we must forecast the work for which they will be intended, and the art will in due time follow.

The ductless glands offer the most romantic field for the surgeon of the future. The slow but certain development of surgery of the thyroid gland with its truly wonderful results from the stand point of the patient is but a foretaste of what is to come. Research devoted to the function of these glands must go on still farther. **It is more than possible that the surgeon of ten years hence will be able through this field to permanently reduce high blood pressure, cure constipation, and so alter personality as to change a dull, stupid adult into one bright and with a zest of life (emphasis added).** It may show the way to cure many forms of insanity and it is not too much to hope that it may hold the solution to the cause and successful treatment of Cancer.

The past ten years has seen the Neuro Surgeon develop in all his glory. His work is yet hampered by lack of certain knowledge of the tremendous complexities of the Central nervous system. Cerebral tumors will be discovered and removed more readily in future. **Brain substance may be deliberately removed to effect personality changed or to develop function in an undeveloped part.**

What of the future of Thoracic Surgery? Already, though with much fear and trembling, lobes of the lung and even the whole lung can be removed. Methods tending to greater safety in this field will follow, and with it more successful methods in the treatment of abscess and malignancy of the lung. Cardiac surgery will become in time a recognized field, and will include the operative treatment of Cardiac muscular pathology as well as of valvular defects. Cases of Coronary Artery thrombosis may yet respond to surgical treatment.

The abdomen for many years has been a field of maximum activity for the surgeon. Regarded for so many years as a locus of the greatest operative risk it became the land of romance to the surgeon and the gynaecologist.

It therefore offers the least room for future development, except in the realm of Diagnosis. The element of doubt as to the cause of the signs of intra abdominal pathology so often present now will be greatly reduced by new devices to explore its dark byways.

The treatment of fractures will likewise be improved by better mechanical devices to effect reduction, to maintain it and later to restore function. More and more they will become a problem for the specialist and the special hospital, as their importance to the future earning power of the individual becomes universally recognized. Along with this will go plastic Surgery, and by its means, **grotesque and repulsive faces preventing the owner from earning a living will be corrected.** This branch of the Art will no longer be a "racket" as it has become in some parts of the world, but conducted under good auspices by honest men.

As mankind regards the medical profession more and more as an essential to its happiness and health it will lose its awe of the occult powers ascribed to it and therefore will arise changes - some for the better some for the worse. The surgeon will no longer be regarded unless he can "produce the goods." If he can do so he will be amply rewarded, but in the days ahead more and more will be demanded of aspirants in this field, in character as well as in professional ability. More

intensive specialization is bound to follow, but under the aegis of the state for the benefit of mankind, and not for the pocket of the specialist who seeks to "corner" the field. The Art of Surgery will increase for its own sake in the eyes of the world, and will be followed for its own sake by the earnest and skillful. The element of financial gain will be eliminated.

Perhaps I am "dreaming dreams" - perhaps I am predicting what in my heart I hope for, but in any case I look forward to the future of Surgery, confident that it will achieve mighty things, and hold great rewards to those who practice faithfully, courageously and with judgement to the end that mankind may live better and happier lives.

The DMJ welcomes additional comments and viewpoints, submitted to dmj@dal.ca