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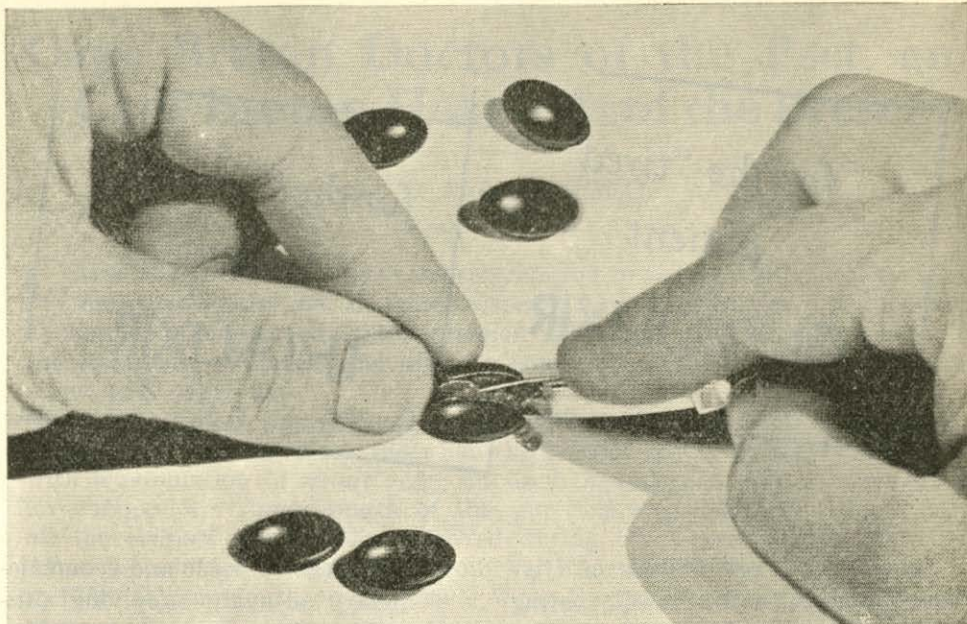
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Cape Breton Doctors of the Past, and Cape Breton Hospitals of the Present

M. D. MORRISON, M.D.

CAPE BRETON ISLAND has been referred to as the "Old Curiosity Shop" of Nova Scotia and, in many respects, the sobriquet is very applicable. Perhaps in none other is the expression more significant than in relation to the treatment of disease and diseased conditions in that romantic isle up to about fifty years ago.

Cape Breton was politically separated from Nova Scotia and given a Government of its own in 1784 when the present city of Sydney was founded with a population of about eight hundred, including a military garrison of six companies. The strength of this garrison was gradually reduced until all the soldiers were finally removed during the Crimean War (1854-55). After the capture of the Island from the French with the fall of Louisburg in 1758, and previously to the arrival of the English Governor, the inhabitants were confined to a few fishing stations which had been established mainly by the French and roughly fortified against Indian attacks. But now so-called Settlements were formed, which continued to be increased in number and to be enlarged in extent from that time forward. From Brown's History of Cape Breton we learn that in 1801 the number of people in the Sydney district was 801, in the Louisburg district 192, and in the Arichat district 1520, making a total of 2,513 souls. But in twenty years more this number was increased to something over 10,000, owing to the arrival of immigrants from the Highlands and Islands of Scotland. With so much good seed laid in virgin soil, and remembering the proverbial proliferation of the race, one can understand why Cape Breton is and always has been decidedly Scotch, with every probability of its continuing so to the end of Time.

From the commencement of the period indicated, namely 1784, up to the end of the first quarter of the 19th century it is safe to assume that outside of Sydney and Arichat there was not a medical man to be found in the whole Island; and that from 1830 up to 1850 we have, in addition, one for Victoria County and one for Inverness County. The first medical practitioners, mentioned by name, were those connected with the garrison at Sydney who occasionally made professional calls beyond the military barracks. In 1829 Dr. Thomas Jeans came to Sydney Mines as surgeon on an emigrant ship about the time the General Mining Association had commenced operations at Sydney Mines, and was engaged by them as Colliery doctor. In 1817 Dr. Andrew Madden, a graduate of Dublin University, landed at the Strait of Canso from a passenger ship on which he had been a surgeon; and after practising for a time all over the country making the journey on foot, by boat, or on horseback he finally settled at Arichat where he died in 1858. Dr. Henry Cline Fixott was another of the first Arichat doctors. In the early fifties Dr. S. G. A. MacKeen of Baddeck held undisputed sway over his medical constituency, comprising the Country of Victoria and part of the County of Inverness. About the same time Dr. Noble, a graduate of Edinburgh Uni-

versity, settled in Inverness County. He made professional visits to the scattered settlements when his services were required, always travelling on foot or in the saddle.

It may well be asked: how did the people of Cape Breton get along, in those years, without adequate medical services? Of one thing we may be certain, namely, that some deaths occurred and that much suffering was endured which could have been prevented by the timely application of medical art and medical science. Another thing that we can safely postulate is that accidents were rare and that cases of internal derangement were appreciably fewer, in proportion to the whole population, than they are today. It is a remarkable fact that the more doctors that exist in any community the more their services are in demand, and the more people seem to become the victims of the ills that flesh is heir to. Did the observation that medical aid was not available so effect the mental processes of those people, during the first half of the last century, that the corresponding bodily processes managed to functionate in a more natural manner than they do now when it is so fashionable to be doctored? Apropos of this statement permit me to quote the following excerpts from the London *Lancet* of Jan. 6, 1940; page 51. The writer is referring to war conditions.

"How remarkably well many people are getting on without going to see doctors, and especially without going to see specialists and particularly surgeons at that...."

"It is clear that there are many people doing without doctors who would have gone to them if their thoughts had not been distracted to other things."

There are, however, one or two factors that may be here recorded in connection with the health of the Island communities in those days. And, first, I would make honorable mention of the clergymen of the day who, in case of many Presbyterian ministers at any rate, made themselves acquainted with the therapeutic principles of Medicine during their college course in Scotland, and who regarded it as a part of their ministerial duties to attend to the health of the people entrusted to their spiritual care. I often heard my own mother say that when she was a child a monthly visitation by the clergyman was always looked for and that, on such occasions, a close interrogation was made of each individual's health as well as of his and her spiritual knowledge. It was deemed as important to remember all about the use of Epsom Salts and of sulphur and molasses as it was to answer correctly: "Which is the fourth Commandment?" And not only did these clergymen give attention to matters of general health and sanitation but they also probed deeply into the moral nature of their flock and in that way, I have no doubt, produced results that made for the inculcation of those virtuous habits that always rebound to the health of the individual.

Next, I would refer to the noble body of midwives, or "grannies" as they were popularly called, who were to be found in every community, and who were always ready, day and night, to answer an emergent call and render such assistance as they might be able to administer. In winter they would travel on snowshoes if necessary, and often would be rowed over billowy seas in stormy weather. There were, at least, three varieties of these midwives. There was the large, beaming, rosy-faced, optimistic woman with the expansive waist, and the expansive smile, whose chief stock-in-trade was the flooding of the situation with cheerfulness and with courage. You can understand how helpful she would be, by her mere presence, at the bedside of the young matron who

was about to become a mother. On the other hand there was the thin-visaged tea-drinking, satirical midwife who gave her patients most disagreeable decoctions prepared from juniper bark and from other unnamable sources, and who sometimes practised incantations with no other purpose than to stimulate Nature to do her work. And, lastly, there was the born nurse, not so numerous as the two former types, whose great delight was to minister to the sick, to observe symptoms, to relieve distress, and to effect cures. Women of this latter type were usually very intelligent, and were regarded with high respect by all classes in the community in which they resided, and sometimes far beyond.

So much for the female quasi-healers: on the male side there was the *bone setter* and the *blood letter*. The latter was the more important of the two, as his services were the more frequently required. With his little sharp-pointed knife, which he carried in his vest pocket but sterilized in boiling water before using, he was always ready to draw his victim's blood, and to continue drawing it until the said victim fainted, or until the operator was satisfied that the so-called "Inflammation" was removed. These men sometimes travelled great distances in pursuit of their voluntary calling: no matter what hour, whether day or night; no matter what day, Sunday or any other; no matter what season of the year, winter or summer—the call for extracting blood was responded to with the greatest alacrity. I believe they occasionally accomplished much good, and that the early opening of a vein by the *blood-letter* saved many a case of an inflammatory nature from advancing beyond the congestive stage.

And finally, though in more or less humorous vein, permit me to refer to the alleged health-giving efficacy, at a later period, of Brayley's Almanac whose yellow covers, decorated on one side with the signs of the Zodiac and on the other with all the tables of weights and measures, enclosed a mass of wonderful information comparable only, in the estimation of many of its readers, to that contained in the Family Bible. Many a doleful sufferer, in the rural districts, was cheered in those days by finding therein a most accurate description of his own particular ailment, confirmed by an exact likeness of his own features as he made the comparison in front of a mirror, and by being positively assured that two bottles—one of R.R.R. (Radway's Ready Relief) and one of B.B.B. (Burdock's Blood Bitters) would restore him again to his wonted health and activity. The medicine was speedily obtained, partaken of with unbounded faith, and, as frequently happens in such cases when of a neurotic nature, with satisfactory results. At any rate the period occupied in disposing of the Compounds (usually a pint measure) together with the soothing psychological factors or concepts accompanying the taking of the "Cure", gave Nature an opportunity of restoring the mental balance which had got into a condition of what may be called "Unstable Equilibrium."

Let us now get into a serious historical mood once more and allow ourselves to revert to a consideration of practical experiences of the medical practitioner, and especially those of the country practitioner, in Cape Breton fifty or sixty years ago. His only means of conveyance was, in winter a horse and sleigh; in summer, at first a saddle horse or a boat; later, a horse and buggy. He had no regular hours and, frequently, no regular meals. Too often his bed was a hard wooden bench on which he would be glad to extend his aching limbs before resuming his homeward journey. His professional fee was not always

forthcoming, and he never thought of such sordid practice as suing a patient. And, perhaps, worse than all he was subjected to the same unjust criticism, and felt it fully as keenly, as his brother practitioner of today.

I can easily recall the commotion caused in the neighbourhood of my own home in Victoria County, about fifty or fifty-five years ago, when it was generally announced that the doctor must be sent for. And especially agitating was this commotion if the necessity arose in the winter time! Old Dr. MacKeen lived at Baddeck, 18 miles from my home in Englishtown. For weeks at a time the roads in winter would be impassable; and as it was usual then for storms in Cape Breton to move in a serial order of three no effort would be made to open out the avenues of travel until the third blizzard had passed over. But if, during the storm, the call came to bring the doctor, nowhere or under no other circumstances, was shown a finer exhibition of human kindness and sympathy than on those occasions. All the able-bodied men turned out with their shovels and with their teams and speedily cut a way through the immense drifts so that medical relief might be brought to the suffering one. Moreover, it was always the swiftest steed in the community that was despatched to bring the medicine man; and, indeed, I have heard of instances where the doctor received his small fee before leaving the house, it having been made up for him by the friends and neighbours of the patient who was too poor to pay.

Just, at this stage, a glimpse of the trials and hardships that the pioneer doctor in Cape Breton had to undergo may not prove uninteresting. If conscientious, he must have often carried a heavy load of responsibility, being debarred from the solaces of professional consultations, and deprived of the benefits and conveniences furnished by nursing homes and hospitals and drug stores. He was continually travelling, and had to spend many nights in strange beds, if in any bed at all, where surroundings and conditions might not be favorable to induce "nature's sweet restorer, balmy sleep." He was necessarily much exposed to inclement weather, and little wonder that we are told he frequently suffered from 'Rheumatism.'

Dr. Samuel George Alexander MacKeen, a graduate of Harvard University, made his home and opened his office in the town of Baddeck, the capital of Victoria County about 20 years before I was born; but as a little boy I have a distinct recollection of the old gentleman as he often drove through our village when on his medical tours. He was a tall, gruff man with a keen knowledge of human nature, good diagnostic powers, and skilful, unwittingly, in the practice of psychotherapy. He was regarded by the country people as a sort of demi-god, to be avoided if possible, but a Rock of Salvation in time of severe bodily or mental distress. His son, the late Dr. George MacKeen, wrote me about his father:

"It is a pity my father did not have time to write a book on his experience during pioneer days in Victoria County; but he was in harness the very day he died, and he never took a holiday in his life. I often heard him relate an account of a fierce trip in mid-winter he made from Baddeck to Bay St. Lawrence—a distance of over one hundred miles—shortly after the trans-atlantic cable had been laid and landed there. One of the two operators in charge fell ill with diphtheria, and there was no one within many, many miles to nurse him or relieve his partner. My father travelled on snow shoes, by dog-sled, and over ice floes, and reaching the sick man remained with him until he made a complete recovery."

Though the labors of the old time doctor were many and arduous, and though the remuneration for the same in actual cash was small yet, on the whole, he led a contented life, happy in the consciousness of work faithfully done, and pleased in realizing that he held the high respect and profound esteem of the general public. He invariably took an active interest in the affairs of the community, especially in the schools; while his political affiliations were always well defined. This latter fact is aptly illustrated in the case of Dr. Angus McLennan of Inverness who, as a politician, gave no quarter though, in other respects, he was as gentle as a lamb. It is recorded that, on one occasion he caused the retreat, in a most unceremonious manner, of the redoubtable Sir Charles Tupper. Sir Charles had been subjected to much heckling at a joint political meeting and, in desperation, he called on the doctor, (the acknowledged leader of the Liberal Party in that County) to "call off his war dogs." At once the politically-pugnacious doctor arose to the occasion and shouted: "Men of Inverness he calls you 'dogs': put him out!" And out he went.

In the person of Dr. William MacKay of Reserve Mines C. B. I had the good fortune of observing personally the transition stage between the old type doctor, referred to above, and the modern type. Dr. MacKay belonged to both periods, and was as familiar with the practice of one period as with that of the other: his professional aim was to keep abreast of the times. As I had the privilege of serving as his assistant for two years, immediately after my graduation in 1895, I had a good opportunity of appreciating his many sterling qualities as a man, and his practical knowledge and resourcefulness as a medical practitioner. His special line was obstetrical work, and with a short pair of Simpson forceps he could perform wonders.

Equally ingenious and successful was his method of dealing with introspective neurasthenics of the male sex and with flamboyant psychoneurotics of the other sex who consulted him in great numbers at all times of the year, and who came from all parts of the Island for the purpose. What a new world he was able to open up to their erstwhile distorted mental vision, and what hope he was able to set up in their hitherto leaden hearts. How frequently the remark was heard that Dr. MacKay's smile was better than all the medicine that other doctors could provide.

And in those early days what a genial companion Dr. MacKay was! What anecdotes he could relate about his college life, and about human beings as he found them, and as he interpreted their respective life views! Sometimes of a summer midnight we would drive out together—a silent and happy time for a man of thought and feeling. The sounds of country night mingle in drowsy harmony: in the distance a dog barks: the moonlight sifts flickering through the leaves, and the dusty road lies dimly undefined. The breezy doctor enjoys it all and spins his yarns, totally undisturbed by the clatter of the horse's big hoofs and the rattle of the wagon tires which are often held in place by a judicious application of haywire, of which a copious supply lies in the bottom of the buggy to provide against emergencies. Dr. MacKay was, undoubtedly, a man of brilliant parts; and had he denied himself the allurements of the political life no doubt his fame in Medicine would have been more than Province wide. But he gave a lot of time, attention, and money to the so-called science of Government, and was finally rewarded for the same by being created a Senator of the Canadian Parliament.

And if Dr. MacKAY may be cited as a good representative of the internal Medicine men of the pioneer period Dr. Arthur Halliburton MacKEEN may be similarly presented as the typical pioneer surgeon of Cape Breton. Dr. MacKEEN, a brother of the late Hon. David MacKEEN, ex-Governor of Nova Scotia, was born in Mabou, Inverness County, and died at Glace Bay C. B. in 1912 at the comparatively early age of 59. He was a man of commanding appearance: the massive head with the high forehead, the keen grey eyes, the well-set powerful jaw, all indicated personality and force of character not easily daunted. He had an intense passion for Surgery and, to the end of his days, he would go anywhere at any hour of the twenty-four to perform an operation, whether paid a fee or not. In Medical Societies he was very popular, as he was capable of expressing his ideas in clear and forcible language, never undertaking to discuss any subject until he had made a good mastery of it. He had also a great fund of humor, and a happy gift of preserving an imperturbable gravity while moving his hearers to merriment.

He was Surgeon-in-Chief at St. Joseph's Hospital, Glace Bay from its opening in 1902 until his death in 1912. To give some idea of the position he occupied among the young surgical staff of St. Joseph's at that time, perhaps I cannot do better than quote the following extract from an article that I wrote a few years ago respecting that Institution: "Dr. MacKEEN was an enthusiast on the matter of preoperative preparation, and those of us who worked about the operating table were truly symbols of surgical purification. None of us shall ever forget his majestic appearance as, equipped in full operating-room paraphernalia, he courageously attacked a complicated surgical problem and almost invariably brought it to a satisfactory solution. The assistants for the day would be keyed up to the highest tension; the silent nurses would be dexterity personified; the amiable Matron would be hovering around during the trying ordeal, casting her well-trained eye over the whole situation, and bringing the sunshine of her cherry smile wherever she appeared."

I have thus placed on the literary screen these poorly-developed pictures of two eminent Cape Breton Medical men in order that those of a later generation might continue to obtain inspiration and encouragement from the remarkable achievements of those pioneers in a transition period between empirical and scientific Medicine. Since their passing, many excellent exponents of the Æsculapian Art in Cape Breton have won well-earned recognition in the medical annals of our own Province and beyond: the pleasant duty of recording the same shall undoubtedly be undertaken in the near future.

And now for a brief reference to Cape Breton Hospitals in the days covered by a portion of the period referred to in the foregoing. The early records are meagre, as during a time when hospitalization was not fashionable and, in truth, was regarded as the last resort for the treatment of disease or disorders those connected with such Institutions, in a professional way, were not eager to enshrine their experience on the written page. The earliest reference I could find in this connection is to the Sydney Marine Hospital, built in 1875 at a cost of about \$10,000. The original building was L-shaped and afforded accommodation in one wing for administration work and in the other for a hospital ward of 20 beds. Heating was, at first, provided by stoves. There have been related, by word of mouth, some remarkable recoveries in the early days of the Hospital; but one of the participants in the glory attaching to the surgical performances of those days was, in a conversation with the present writer some years ago, inclined to attribute, to a certain extent at least, the

alleged good results obtained to two mottoes hanging on the walls in full and direct view of the patients, namely, "All must die" and "Prepare to Meet your God." The determination of the patients to do neither of these things, he facetiously remarked, helped materially to pull them through many a stormy convalescence.

Point Edward Sanatorium, situated on a peninsula about 4 miles from North Sydney by water, was opened as a quarantine Station in 1883. The plant consisted of two detention buildings each 21 feet by 28 feet, one disinfecting building 25 feet square, a barn and a wash house. These buildings were not very substantial, being constructed of wood and the Hospital was abandoned in 1927.

But with the advent of the Dominion Coal Company in 1893, when it bought up nearly all the coal mines operating in the Island, it became apparent to the Medical men practising at the Collieries that the time had arrived for the inauguration of hospital facilities. The introduction of new machinery of an advanced design and, consequently, of new methods in mining operations suggested the great probability of a marked increase in the number of accidents and in the gravity of the injuries sustained thereby. It was thoroughly realized that very little could be accomplished in making proper provision for such contingencies without a hospital and, accordingly, the slogan was sounded. To their everlasting credit the Medical cry was heard by a goodly number of persons with philanthropic tendencies—men of vision and intelligence—but especially by two clergymen Rev. Father Ronald McDonald of Glace Bay and Rev. Father C. W. McDonald of Bridgeport who zealously grasped the situation and who vigorously persisted in their objective until St. Joseph's Hospital at Glace Bay was opened for service on July 1, 1902.

Just before this date the Dominion Steel Corporation, a subsidiary of the of the Dominion Coal Company with local headquarters in Sydney, built for its injured and sick employees the Brookland Hospital on the present site of the City Hospital. It was a two-storey building, was steam-heated throughout, and furnished accommodation for 25 patients. In 1904 it was enlarged and continued its good work until June 18, 1913 when it was destroyed by fire. In 1916 the present City Hospital was completed and its services, for about 1,400 yearly admissions, gradually brought up to a high state of efficiency. A Nurses' Home was erected in 1923, and in 1932 an Annex for 45 beds was added for T. B. patients.

St. Joseph's Hospital at Glace Bay is today one of the finest and best-equipped institutions of its kind in the Maritime Provinces. It has gone on from strength to strength, continuously providing for increased accommodation and for the introduction of the latest-proved Hospital facilities.

The same high commendation may be asserted as to the competency and the services afforded at the Glace Bay General Hospital which has been intensely engaged in its beneficent and far-reaching work since 1914. It has lately commemorated its twenty-fifth anniversary, and has announced an extension to the main building, an enlargement of its X-ray and laboratory departments, and the establishment of a T. B. unit within the coming year. The Medical and Surgical Staffs are the same as at St. Joseph's and the general equipment, though not yet quite so extensive at the General, is about the same in character at both places. The above-mentioned three Hospitals are fully approved by the American College of Surgeons as first class Institutions, and

are provided with commodious Residences for Nurses who are required today to hold a Grade XI Provincial Certificate of Education on admission to their Training Course.

Besides these three main Hospitals, St. Joseph's and the General at Glace Bay and the City Hospital at Sydney, there are splendid smaller but well-equipped Institutions at New Waterford, North Sydney, Sydney Mines, Inverness, and Sydney (St. Rita's) where excellent work is being done by well-trained and skilful practitioners who keep themselves up to date, professionally, by frequent post-graduate studies in the best Hospitals of Canada and the United States. There is no scarcity of material to test their ability as, today, hospitals are not regarded by the laity with the horror they created some years ago.

Most valuable in connection with the matter of hospitalization in Cape Breton has been the so-called Hospital Ladies Auxiliary without whose self-sacrificing and extraordinary exertions, financial and otherwise, none of those Institutions could have been properly maintained and, eventually, brought up to their present enviable condition.

Nor should the opportunity be missed to say an appreciative word for the hundreds of nurses that have graduated from the training schools connected with some of these hospitals and who have gone forth to carry the consolations of comfort, peace, and hope to the afflicted throughout the country. What a striking transformation has been effected in the care of the sick and the injured in Cape Breton during the period under present review through the agency of doctors, nurses, and hospitals!

Systolic Murmurs—Their Significance

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THE Six Year Survey (1933-1938) of the Students' Health Service of Dalhousie University, as reported by Dr. H. G. Grant, Professor of Preventive Medicine Dalhousie University, contains some very interesting statistical information. This report shows that some 2,187 young adult University students (1,694 males and 493 females) were examined by the Medical Members of the Dalhousie Public Health Clinic.

As published by Dean Grant, in the December number of THE BULLETIN, Table Number 13 refers to the examination of the Heart and reveals the following information.

Table No. 13

HEART

	Number			Per Cent		
	Males	Females	Total	Males	Females	Total
Normal.....	1,475	422	1,897	87.1	85.6	86.7
Functional systolic murmur.....	159	59	218	9.4	12.0	10.0
Chronic rheumatic heart disease....	56	11	67	3.3	2.2	3.1
Other conditions.....	4	1	5	.2	.2	.2
Total.....	1,694	493	2,187	100.0	100.0	100.0

The important finding here is that over 3% of the group showed clinical evidence of chronic rheumatic heart disease.

These figures are particularly interesting from a cardiologic viewpoint. Over 3% of a group of apparently healthy young men and women of undergraduate ages (2.2% of whom came from rural areas) had clinical evidence of chronic rheumatic heart disease; 2.5% had a previous history of rheumatism; 5.5% had tonsillitis; 18.4% had scarlet fever; 2.2% had previous attacks of heart disease. A functional systolic murmur was found in 10% of all the cases examined.

The presence of a systolic murmur in an apparently healthy young adult is always worthy of thorough investigation. If it is

(A) A slight to moderate systolic murmur at the pulmonary valve area, heard best, with the patient lying down during full expiration, and fading or disappearing with deep inspiration or,

(B) A slight systolic murmur at the apex, which varies up to the point of disappearance with changes in respiration and position, then, these are identified as cardiorespiratory murmurs and we may quite properly consider them *Functional* or *Physiological Murmurs*. We should

not, however, dismiss as innocent systolic murmurs that do not fit into one or other of the above groups.

The physical causes of a systolic murmur and its clinical implications have been the subject of much study for a great many years. Through the work of Sir James MacKenzie, the seriousness attached to a systolic murmur by patient and physician was materially minimized. Before this they were treated with considerable apprehension. During the past twenty-five years the pendulum has swung to the other extreme. Now they are being evaluated by a middle-of-the-road attitude. This, to me, seems the safest and most logical viewpoint.

To definitely label a systolic murmur certain requisites are essential:

- (1) It must be a brùit that has an appreciable duration. In other words, it must come *after* the first sound and *last into systole*.
- (2) It must have a significant duration apart altogether from its intensity.
- (3) It must not be confused with a prolonged first heart sound.

Personally, I think Dr. Levine's idea of grading systolic murmurs as to their intensity, of practical clinical value. He grades their intensity from 1 to 6. One is the faintest and six, although rare, can be heard with the naked ear held some distance from the chest wall.

Systolic murmurs at the apex are most commonly due to organic disease of the heart, with dilatation, without necessarily any mitral valve deformity. It is frequently quite difficult to distinguish a loud mitral insufficiency murmur from a loud Aortic Stenosis murmur—as both may be present at the apex. A clinical point (White) of importance in distinguishing a systolic murmur of mitral insufficiency from aortic stenosis is that the former, if loud, is well heard at the lung bases in the back, but poorly at the base of heart and in the neck, while the latter is poorly heard at the lung base and well in the neck and at the cardiac apex.

A systolic murmur may occur in the presence of organic valvular disease or in its absence. We find it in Congenital hearts and in Dilated hearts, in Anaemia, Hyperthyroidism, Hypertension, Tachycardia and in Fever.

If you cut one of the mitral valves in a dog, you will have a resulting mitral insufficiency immediately and whenever there is regurgitation of blood through the mitral valve, one will hear an apical systolic murmur. So that the valve does not have to be diseased to produce this murmur, *incompetence* will produce it. In a young person with a past history of rheumatic fever, it is of more than passing significance.

In order to determine how frequently systolic murmurs occur in normal individuals, Dr. Levine examined 1,000 carefully selected cases. 19.6% were found to have a grade 1 or 2 systolic murmur. When these cases were carefully checked over for a provocative cause such as Obvious Heart Disease, a past history of Rheumatic Fever; Anaemia; Hypertension; Hyperthyroidism; Fever; there remained only 4.5% who had a functional systolic murmur. This percentage is less than half found at Dalhousie.

Some Insurance Companies require auscultation of the heart before and after exercise. This exercise often brings out a systolic murmur at the apex. From this, they draw conclusions which often debar applicants from being accepted as ordinary risks, regardless of the fact that all apical systolic murmurs occurring only after exercise may be considered as a normal phenomenon.

The writer had considerable difficulty in convincing a Canadian Government Dept. to accept a perfectly fit young applicant because one of their examiners had heard a systolic murmur after two minutes' strenuous exercise which they admitted was not present without exercise. This, to me, seems drawing a very long bow.

If the murmur is heard and constant from day to day, and if it is audible during any phase of respiration and with the patient sitting, standing, or lying on his left side, even in the absence of hypertension, a diastolic murmur or cardiac enlargement, then this type of systolic murmur must be considered with grave suspicion. Most Insurance Companies consider that systolic murmurs after the age of 40 are seldom innocent. Most physicians will, I think, concur in this.

Acquired valvular heart disease results in cardiac enlargement in almost every case. In the great majority of cases typical changes in the cardiac contour are demonstrable.

Dr. Paul White emphasizes the importance of carefully noting the character of the heart sounds, and says, "It is astonishing how often the doctor rests content if he hears no murmurs, even with valuable information about the state of the heart from the sound alone right at hand."

This is wise advice born out of years of careful cardiac auscultation. Heart sounds and heart size merit careful consideration, but the condition of the myocardium is what really matters in the final analysis.

A systolic murmur which is heard best along the right intercostal space (second), is by no means peculiar to Aortic stenosis. It most commonly is found where there is a widening of the aorta as a result of arterio-sclerosis or hypertension: it is sometimes present as a result of syphilis. When found, this type of systolic murmur is *blowing* and not harsh like we find in aortic stenosis. The distinguishing point here is that the aortic second sound is ringing in quality and accentuated; while when due to a stenosis of the aortic valve it is rather definitely decreased or entirely absent.

We should keep in mind that all systolic murmurs merit careful evaluation. The fact that the Dalhousie Students' Health Survey found over 3% of their group with clinical evidence of chronic rheumatic heart disease is a fact worthy of our consideration. It would be interesting to have follow-up studies on the 10% found with functional systolic murmurs. It is also of more than academic interest to know whether any of this 10% group were found in the 6.5% group, whom they found with systolic blood pressures of 140 and over. No diastolic readings are reported.

This very thorough investigation is of more than passing importance. It is to be commended by all physicians in our Province. I know of no other similar study done in Nova Scotia. The fact that the examinations were limited to three patients an hour speaks for the care and thoroughness of their work. I would like to compliment Dean Grant and his Associates.

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*Collapse Therapy in Bilateral Pulmonary Tuberculosis

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NOT so many years ago, as you all know, the treatment of pulmonary tuberculosis consisted of rest, good food, fresh air, and general hygienic measures. To these general measures, were added, one by one, procedures which were designed to reduce lung volume and decrease lung function, thereby giving more perfect pulmonary rest and adding factors more favorable to a more rapid and more certain arrest of disease. These collapse procedures were at first used in very limited groups of patients. As time has passed their indications have broadened tremendously until to-day we can say that collapse therapy is "The" treatment of the disease. In some institutions the number of patients receiving some form of collapse therapy reaches as high as 97 per cent. I do not mean to minimize the importance of rest, etc., in the "cure" of the patient as it always has been and, I suppose, with our present knowledge, always will be the mainstay in our general program. However, I like to regard it more in the light of a prolonged convalescence than the actual treatment. This I say knowing full well that many far advanced, and possibly apparently hopeless cases, have regained health without the benefit of any other form of treatment.

Those of you who have followed the evolution of the treatment of this disease know that as each procedure was introduced and brought into use, the requirements were always a good contra-lateral lung. The original requirements for pneumothorax for instance was disease in one lung only and a free pleural space. This, of course, could include a relatively small group. The necessity for thoracoplasty also was a contra-lateral lung with no or very little disease, and if a little disease did exist, it must be of a chronic fibrotic nature. This too allowed of a relatively few to receive the benefits of the operation. There remained a very large group, namely; the bilateral ones, that had to depend upon rest treatment alone and it is of these that I wish to speak very briefly tonight.

For too long a time, I believe, we have regarded the chest as consisting of two distinct and independent halves. Is it not more sensible to consider it as a unit with disease in certain parts? One patient may have extensive disease in one lung with a relatively good contra-lateral lung. Another may have an equal amount of disease, confined to the apices of both lungs. Both have an equal amount of functioning lung and pulmonary reserve. Why should collapse be reserved for the first? The answer is, of course, that it should not and to-day in the majority of institutions, bilateral collapse therapy has assumed a role of prime importance. There, however, still remains a tendency, among the profession at large, to regard far advanced bilateral

cases as more or less out of the picture in so far as this type of treatment is concerned.

Why has it become possible to include this group as candidates for collapse therapy? The answer to that is simply improvement in procedure and refinements of technique. The original thoracoplasty for instance, as you know, was a partial, total collapse if you know what I mean by what sounds like a paradox. By that is meant that the whole lung was partially collapsed. The operation was accomplished by starting at the lower ribs and working upward removing short sections of all, thereby decreasing the diameter of that side of the chest. The modern thoracoplasty on the other hand is designed to produce a total collapse of the diseased area, leaving the good part of the lung to carry on its function. This at once gives it a greater application. All the major forms of collapse therapy to-day are designed to produce as selective a collapse as possible, thereby leaving the patient with a maximum amount of functioning lung. It is little satisfaction to a patient to be cured of his tuberculosis and be left with so little pulmonary reserve that even walking to the bath room will cause him to become short of breath.

There is no branch of surgery in which it is more difficult to set down indications for certain procedures than it is with pulmonary tuberculosis. Each case has to be considered unto itself and procedures adopted that appear most appropriate. The problem of selection becomes even more difficult with the bilateral cases. However, certain broad general principles may be laid down.

As in every case of tuberculosis in which collapse therapy is contemplated the status of the patient, at the time operation is undertaken, has to be very carefully considered. Tuberculosis is an allergic disease and so runs in phases. There are times that the patient, in spite of extensive and even extending local disease, is in a relatively good general state. He has little or no fever, appetite is good, weight is maintained and indications of a general toxic state are absent. This patient is in a so-called positive phase and it is during such times that the best results of operations are to be expected. Another patient may have even a less extensive lesion, but in general is not doing well. Fever, loss of weight and a poor appetite are all present. There is a general state of toxicity. Little upsets and minor infections produce excessive disturbances. He is what we call at the Sanatorium as being of the "soft" type; the type that experience has shown can stand very little in the way of added burden. These patients are in the so-called negative phase, i.e., they have lost their resistance or are in a state of sensitivity to their disease. Manipulations of diseased parts at such times will further sensitize with consequent spreads or reactivation of quiescent foci.

It is during these negative phases that any form of collapse in bilateral cases should be avoided unless a "last chance" attitude has to be adopted in relation to some particular case. If collapse therapy is resorted to at such time, the minimum should be done at any particular time. If pneumothorax is the procedure chosen, it should be proceeded with slowly and cautiously. If thoracoplasty is chosen, as few as one rib at a time should be removed. Over operating will most certainly result in disaster. Very frequently these patients presenting themselves in negative phases can with rest and proper care be converted to a positive phase at which time a collapse measure can be instituted with a relative degree of safety. It is for this reason that I believe they should be under the constant observation of a trained institutional

staff in order that procedures might be instituted at the most opportune time. I will grant you that it often takes a long time to bring a far advanced bilateral case to a final and safe termination of treatment.

The status of the patient is of importance, first in deciding if any form of collapse should be undertaken and secondly, once it has been decided to proceed, just how radical the form of collapse might be. Similar lesions might of necessity be treated differently in different patients depending upon this factor of personal resistance.

The second general principle in selections is that procedures should be chosen that will, at the termination of treatment, leave the patient with the maximum of vital capacity and pulmonary reserve. This is of equal importance in predominately unilateral cases. Far too frequently I have seen cases in which the lesion was at first principally unilateral where for instance, a permanent phrenic paralysis was done with a high rise in the diaphragm. An extensive lesion in the opposite lung later appeared requiring thoracoplasty. The permanency of the phrenic robbed the patient of much needed pulmonary reserve and in one or two cases, I recall, it was so reduced that operations could not be undertaken and the patient doomed to die from progression of disease, when it could have been checked with a little extra reserve. This is one reason that I cannot subscribe to the idea of doing these minor procedures at points where such operating is undertaken infrequently. The doing of a permanent phrenic paralysis is a minor and easy operation. The doing of a proper temporary one, however, is ever so much more difficult and dangerous as small accessories have to be sought out and dealt with. The tendency for the infrequent operator is therefore to do the easiest and safest operation which in the vast majority of cases is not the best. I suppose at the Sanatorium we have not done more than three or four permanent operations in the last 150 or more.

It is obviously impossible to state, in relation to bilateral cases, just where and when each specific procedure should be used, due to the fact that numerous combinations of circumstances exist in such a group. It is easy to say in unilateral cases when pneumothorax, phrenic, extra-pleural pneumothorax, or thoracoplasty should be applied. Experience has taught all this. In bilateral cases, however, conditions are different. In a case for instance there might exist a lesion in one lung best treated, if considered alone, by pneumothorax and in the other lung a lesion requiring thoracoplasty. The control of the pneumothorax side might require sufficient collapse to make thoracoplasty on the opposite side impossible. A selective type of collapse such as extra-pleural pneumothorax therefore has to be chosen in the place of the ordinary pneumothorax in order to conserve the needed vital capacity and pulmonary reserve.

It is obviously impossible to consider the indications of the various types of collapse therapy in a paper of this scope, and it is probably unnecessary as they are already familiar to the most of you.

To indicate how frequently it is required to treat bilateral disease, out of a group of 100 consecutive thoracoplasty cases done at the sanatorium which have been recently analyzed by us, 65 had bilateral disease and of these 21 required contra-lateral collapse measures.

I wish to show you in a brief and sketchy manner a few cases in which dilateral collapse therapy has been applied showing some of the various com-

binations that can be used. I might state that I have not attempted to pick cases with extensive disease in both lungs. These cases represent the rank and file of the bilateral cases chosen at our institution. At some other institutions more extensive lesions are accepted.

Bilateral Pneumothorax with Right Pneumolysis.

Miss E. W. Admitted: July 9, 1936.

On admission the patient gave a history dating back to March 1936. She had loss of strength, appetite, and weight, and an unproductive cough but no other symptoms. At this time she weighed 95 pounds; had no fever and the pulse was 106 per minute.

She was diagnosed far advanced R_3L_2 and at this time had a recent tuberculous lesion in the upper lobe with a thin walled cavity on the right and a more extensive lesion with a cavity on the left.

It was decided to give her bilateral compression and on July 30, 1936, a pneumothorax was initiated on the left and on August 22, 1936, a pneumothorax was initiated on the right.

In November, 1936, she had a bilateral collapse of 30% on each side with no cavities seen. This bilateral pneumothorax has been continued until the present time. In November, 1937, she had a collapse of 50% on the right and 30% on the left. By September, 1938, she had a collapse of 60% on the right with lung held out by a broad adhesion and 30% on the left.

In March, 1939, it was decided to re-expand the left side to 15-20% and to do a pneumolysis to cut the adhesion on the right. This pneumolysis was done on May 2, 1939, and following this the collapse on the right amounted to 75%. At the present time there is 50-60% collapse on the right and 50% on the left.

The patient's general clinical condition has improved very much during this time and at present has no symptoms, has good strength and appetite and weighs 100 pounds. She works as a switchboard operator which job she has held for the past year and one-half.

Mrs. V. M. Admitted: January 29, 1935.

On admission the patient gave a history of tuberculosis diagnosed by X-ray in 1931. She had "cured" until 1933 and then worked until November 1934 when she noticed loss of strength, weight, and appetite. She had a slight cough and some sputum (Gaffky VI on admission) and fever up to 103° with a questionable history of dry pleurisy. Her weight was 106.

She was diagnosed far advanced R_3L_2 with a fairly recent tuberculosis involving the upper lobe on the right with a cavity 6 x 3 cm. On the left there was also recent advanced tuberculosis with a small cavity of 1 x 1 cm. She remained in bed until January 1936 with evidence of healing on both sides.

On January 23, 1936, a pneumothorax of 30% was initiated on the right but was discontinued on March 6, 1936, because of adhesions. A phrenicotomy was performed on the right side on May 22, 1936, with an elevation of the diaphragm amounting to 5 cm.

She was discharged on June 22, 1936, as improved.

This patient was re-admitted on January 30, 1937, with a history of streaking, a slight cough, sputum Gaffky 111, although she had been taking the cure at home. At this time she was diagnosed far advanced, with exten-

sion and activity and a cavity on the right measuring 5 x 3 cm. and a scattered partly healed lesion on the left. She was discharged on July 31, 1937, to take the cure at home.

She returned on October 9, 1937, as far advanced. There was no extension or activity and her weight was 115 $\frac{3}{4}$, sputum—1 ounce, Gaffky 11. She continued on rest but X-ray on May 20, 1938, showed slight extension on right with no change on the left. Her sputum had decreased to one half ounce and her weight had increased to 132 $\frac{1}{2}$ pounds.

Because phrenicotomy with elevation of 3.5 cm. and rest had produced only fair results on the right and the lesion was now of a chronic fibroid nature it was decided to do a thoracoplasty on this side. Pneumothorax had been tried but abandoned because of adhesions.

A buffer pneumothorax was initiated on the left side on September 7, 1938, and by September 24 it amounted to 30%. On October 4, 1938, the upper 3 ribs and on October 28, the next 3 ribs were removed by two stages of thoracoplasty operation. This caused good collapse of the lung with disappearance of 2 $\frac{1}{2}$ x 1 $\frac{1}{2}$ cm. cavity seen before thoracoplasty.

On March 7, 1939, it was decided to re-expand the left lung and this was completed on April 11, 1939. The patient left the Sanatorium on May 15, 1939, with disease quiescent, one ounce of sputum (repeatedly Gaffky 0) and feeling fine. At present she has increased her exercise and takes care of herself taking things "easy" around the house. There is good collapse due to removal of the upper 6 ribs on the right and scattered lesion from the apex to the 4th rib on the left.

C. K. Admitted: September 18, 1934.

On admission, the patient gave a history dating back to April, 1934. He had loss in strength, weight and appetite, a cough and expectoration of one ounce per day and also had a fever of 99° at this time with a pulse rate of 90 per minute. At this time he weighed 150 lbs.

He was diagnosed moderately advanced L₂ with slight calcified areas on the right and a *recent tuberculocis with cavity formation on the left*. He left the Nova Scotia Sanatorium on October 19, 1934, to continue treatment at home. An X-ray taken outside on July 8, 1935, *showed definite extension in both lungs with cavities in both lungs*. He was re-admitted here on September 25, 1935, at which time he was diagnosed far advanced R₃L₂ (extension and activity). At this time his cough and sputum (one ounce) still were present and he had had an haemoptysis of 2 ounces on June 27, 1935. At this time in September 1935 his sputum was Gaffky 111 and he had recent lesion on right from apex to 10V.S. and 4R. and on left he had definite extension with cavity of 4 x 4 cm. On April 3, 1936, the right side showed some evidence of clearing as did the left but the cavity on the left now measured 6 x 3 cm. In December 1936, the right side showed good healing but the left side showed no change and he had a left broncho-pneumonia with temperature up to 100°. By April, 1937, there was atelectasis on the left side and the cavity in this lung now measured 9 x 5 cm. At this time the sputum was Gaffky IV.

On September 3rd, 1934—October 16th, 1934, four attempts were made to initiate left pneumothorax but none were successful.

On April 15, 1937, pneumothorax was initiated on the right side and on April 23, 1937, the first stage of a thoracoplasty was done on the left with

removal of the upper 3 ribs. At this time the collapse on the right amounted to 20-30%. In the following two stages on May 7th and 22nd, 3 and 2 ribs were removed and by June 3rd right lung had re-expanded and left thoracoplasty side with removal of 8 ribs showed 80-90% compression but still signs of cavity. On June 8, through a parasternal incision the cartilages and remaining portions of the 1st 2 ribs were removed and following this no cavity was visible. At this time the sputum was negative. X-ray in March 1938 showed the disease under control on the right side and good collapse on left. He left the Sanatorium on May 28, 1938. Quiescent and gradually increased his exercise. He has been working actively since.

Mrs. A. B. Admitted: July 13, 1937.

On admission the patient gave a history dating back to Oct. 1936. She had loss of strength, weight, appetite, and had a cough and expectoration with a history of dry pleurisy on both sides one month before admission. At this time she weighed 82 pounds, no fever but a pulse of 108 per minute and her sputum was positive.

She was diagnosed far advanced tuberculosis R₂L₂ and at this time had a disseminated mixed exudative productive lesion from apex to base on the right and a localized caseous broncho-pneumonic parenchymatous lesion from apex to third rib with a moderate sized cavity on the left.

She remained at bed rest and on March 10, 1938, she was delivered of a baby boy by Caesarian section. At this time there was slight extension on the right and no great change on the left which showed a cavity of 2½ by 2 cm. By Dec. 1938 she showed continued improvement on the right but extension on the left. On March 4, 1939 the patient showed further improvement on the right but the left side remained the same with a cavity of the same size.

At this time she had a Gaffky 6 sputum and it was decided to perform a left thoracoplasty operation, with a buffer pneumothorax on the right. This was decided because the patient would have been unable to get refills for a pneumothorax on the left and two years of bed rest had failed to improve this side.

On March 17, 1939, a buffer pneumothorax on the right was initiated and by July 27, 1939, this side showed 30-40% collapse. On Aug. 15, the first stage of her thoracoplasty was performed with the removal of the upper two ribs. Three other stages followed with the removal of two ribs in each stage the last one being on Oct. 3, 1939. Before her thoracoplasty operation her weight had increased to 110, she had one ounce of sputum but still had no fever. At present she still has pneumothorax on the right side amounting to 20% and has good collapse of the left side due to the removal of the upper eight ribs. The sputum is negative and she is symptom free.

C. L. Admitted: July 29, 1929.

On admission the patient gave a history dating back to January 1929 and he had loss of strength, weight and appetite. He had a cough, sputum one ounce, with fever of 101°, a weight of 106 lbs.

He was diagnosed moderately advanced R₂L₂ and was put on bed rest. On October 17, 1929, he developed a pleurisy with effusion on the right side with a temperature of 100-102°. He was discharged on July 6, 1930, with the condition apparently arrested.

He was re-admitted on October 13, 1930, with moderately advanced R_3L_2 , improved with no characteristic symptoms and had gained nine pounds in weight. At this time he had no sputum but in February 1931 sputum began to appear and was found to be Gaffky 1 in July. He went home for the summer on August 23, 1931, improved and then was re-admitted on October 27, 1931, moderately advanced and doing well but had lost 6 lbs. in his 2 months at home. On December 15, 1931, his sputum was Gaffky 11. At this time on the right there was scattered mottling in the apex and 1st I.S. and on the left there was a lesion in the apex and 1st and 2nd I.S. He was discharged on September 28, 1932, as quiescent.

He was re-admitted January 4, 1933, moderately advanced. No extension or activity but his sputum had increased to one ounce a day. At this time all laryngeal structures were reddened and the patient was put on whisper treatment. His clinical course proved uneventful and he was again discharged on June 25, 1933, with the condition quiescent.

He was re-admitted on August 17, 1936, at which time he had loss in weight, appetite and a cough had developed. Three ounces of sputum, positive for T. B., (Gaffky VI) and an haemoptysis 11 ounces on August 15. This time he was diagnosed far advanced, extension and activity R_1L_2 . On the right there was a mixed exudative productive infiltration in the apex with a possible cavity and on the left there was a cavity of 5 x 3 cm. At this time he was diagnosed laryngeal tuberculosis as well.

It was decided to do a phrenic crush on the right and this was done on September 11th, 1936, with immobilization of the diaphragm and elevation of 2.6 cm. A 2 stage thoracoplasty on October 3 and November 10, 1936, was performed with removal of upper 6 ribs and resultant good collapse and disappearance of cavity. Patient was discharged on July 2, 1937, with slight partly discrete lesion in the apex on the right and good collapse on the left. His weight was 113 lbs., sputum one-half ounce (negative for T.B.) and he had no other symptoms. He has gradually increased his exercise and the last examination on May 4, 1938, showed the disease well controlled.

Miss E. R. Admitted: November 2, 1932.

On admission the patient gave a history of pleurisy with effusion on the left side in 1920 and also pleurisy with effusion on the right side in May, 1932, (both diagnosed by aspiration). At the time of admission she had almost completely recovered from effusion symptoms of high fever, loss in strength and weight, etc.

She was diagnosed as far advanced pulmonary tuberculosis R_2L_2 , with no sputum. On admission the temperature, pulse and respiration were normal. At this time she still had effusion on the right with upper lobe infiltration and an advanced tuberculous infiltration with a small cavity formation on the left. This soon showed some clearing. She was discharged from the Sanatorium on April 22, 1933, as quiescent, weighing the same as on admission, but X-ray showed some improvement on both sides. A small cavity still present on the left.

She went home and took things easy, taking some exercise. She was readmitted February 27, 1935, at which time she was diagnosed far advanced R_2L_2 with questionable extension on the right. She had gained 14 pounds since discharge but the sputum at this time was positive for T.B. She had a

fever of 99-99.2°. Also at this time, she was diagnosed as tuberculous colitis by a G.I. Series. In March, 1935, pneumothorax was attempted on the left but was inoperable. She was discharged on April 30, 1935, with the disease quiescent.

She was re-admitted on October 6, 1936, and at various times during the interval she had sputum positive for tubercle bacilli. At this time she had a cough and three ounces of sputum. Temperature, 99.6°. Tubercle bacilli in the sputum, loss of strength, weight and appetite, marked hoarseness due to tuberculous laryngitis, and haemoptysis one ounce on October 4, 1936, and streaking on other occasions.

At this time also her X-ray films since admission had shown a slowly healing lesion in the right lung with some clearing but honeycomb cavitation on the left side. It was decided to do a left thoracoplasty and as a precautionary measure a phrenic crush was performed on the right on November 3, 1936, with 3.7 cm. elevation of the diaphragm. On January 29, 1937, the upper 4 ribs on the left side were removed, on July 16, 1937, the 5th and 6th and on August 10th, the 7th and 8th ribs were removed. Following this there was good collapse on the left with possible atelectasis here and the lesion on the right showed no reactivation. The patient improved clinically. She was discharged on May 12, 1938, as improved. She has come back for frequent check-ups and now observes two-hour rest periods in the afternoon with a fairly normal life and the disease is under control.

Mr. J. C. Admitted: July 23, 1938.

On admission the patient gave a history dating back for one month with fever of 99°, a cough and one ounce of sputum per day with no other symptoms. His sputum was Gaffky VI at this time.

He was diagnosed far advanced tuberculosis L₂ and X-ray showed no disease on the right with advanced exudative lesion from the apex to the base on the left with cavities of 3 x 4½ cm., 2 x 1 cm. and possibly some small ones. He was put on rest and pneumothorax was attempted on the left side in July but the patient was inoperable. Despite good rest, there was noted extension on the right on September 23, 1938, and the cavity on the left measured 5 x 3 cm., although this side appeared more fibrotic. The patient gained 10 lbs. in the interval. His X-ray on February 27, 1939, showed definite improvement on the right with no great change on the left, his sputum, Gaffky VI, but no fever. It was therefore decided to do a multiple stage thoracoplasty on the left with buffer pneumothorax on the right. On March 22, 1939, a buffer pneumothorax was initiated on the right up to 30% at the time of his first left thoracoplasty stage on April 18, 1939, when the upper 2 ribs were removed. On May 2nd, the 3rd and 4th ribs were removed, and on May 16th, the 5th, 6th and 7th ribs were removed.

The patient was discharged on September 27, 1939, as quiescent and had no cough, sputum or other symptoms. His right lung had completely re-expanded and there was a well healed lesion seen. On the left there was a good collapse of the underlying lung.

Mr. P. McE. Admitted: April 17, 1925.

On admission, the patient gave a history dating back to December, 1924. He had loss of strength, dry pleurisy on both sides and history of haemoptysis—one-half ounce, in March, 1925. He had a slight hacking cough and the sputum was Gaffky 111. He had a fever of 99° and gave a history of night sweats.

He was diagnosed moderately advanced R₃L₂ with scattered involvement of right lung and chronic caseous broncho-pneumonic disease in the middle third of the left lung. He remained at bed rest and in April, 1926, there were signs of clearing which continued to heal slowly and showed more and more fibrosis on both sides with a questionable cavity on the left side in March 1928. In April, 1928, a phrenicotomy on the left was done with good fixation and rise of diaphragm. He was discharged from the Sanatorium on May 24, 1928, as quiescent.

He returned on November 21, 1928, and at this time he was diagnosed moderately advanced R₃L₂, with no extension or activity. In April, 1929, the right side showed recent disease with possibly a small cavity and the left side showed a well healed lesion. An X-ray on June 11, 1929, showed definite extension of the disease on the right with the left side still well controlled. This remained very much the same and on October 31, 1930, the patient was discharged as quiescent.

He was again re-admitted on July 10, 1934, and prior to this had been working as an auto mechanic. At this time the disease on the right side was mixed exudative productive in the apex and 1st I.S. and a well healed lesion in the left apex. A special film showed a small cavity in the right apex. He left on April 17, 1935.

He was re-admitted on August 27, 1935, after he had haemoptysis 20 ounces on August 26. At this time the right side showed reactivation and the left side showed no extension. On November 5, 1935, the upper three ribs were removed on the right side by a thoracoplasty operation with good upper lobe compression. The patient went along and after this had no cough or sputum and started working in July, 1936, and did very well but the apical lesion on the left remained. On April 30, 1937, a thoracoplasty with the removal of the upper four ribs was performed on the left side which gave good collapse. The patient has done very well and at present is working and has absolutely no symptoms.

Mr. M. G.. Admitted: January 8, 1930.

On admission the patient had no symptoms at all but due to pleurisy with effusion several years before he had been examined every year and at this time an X-ray showed a partly healed lesion in the right and upper lobe lesion on the left showing no signs of healing. At this time he had no sputum. He was diagnosed moderately advanced R₂L₂ and rest treatment was advised. He was discharged on July 3, 1931, with the condition of the disease arrested.

He was re-admitted on February 10, 1938, and in the interval after easy resting for some months after the first discharge he had been doing very heavy work. He had a cough, one ounce of sputum—Gaffky 111 dry pleurisy on the right, and gave a history of IV ounces haemoptysis in December 1935. At this time also his Kahn was positive. He was diagnosed moderately advanced, extension but no activity. On the right there was a mixed exudative

productive lesion in the apex and 1st and 2nd I.S. with a cavity measuring 2 x 2 cm. and fine mottling to the base. On the left there was a mainly fibroid lesion in the apex and 1st I.S. and similar mottling to the base. In February 1938, soon after admission, a pneumothorax was attempted on the right side but was inoperable. Rest treatment was continued.

By September 1938 there was some improvement but there was a cavity $1\frac{1}{2}$ x 1 cm. on the right and probably honeycomb cavitation in the extreme apex on the left. Due to bilateral disease and cavitation, positive sputum, inoperable pneumothorax on the right and a lesion there too great for a phrenic, it was decided to do an extra-pleural pneumothorax on the right side followed by a similar procedure on the left. Thoracoplasty was not considered at this time because of the extent of the disease on both sides.

On February 2, 1939, a right extra-pleural pneumothorax was performed and on March 17, 1939, a similar procedure was performed on the left. This resulted in almost complete collapse of the upper lobe with no cavity seen on the right and with excellent collapse of the upper half of the lung and no cavity on the left. The patient is still in the Sanatorium, feels well and has no symptoms except for one-half ounce of sputum which has been repeatedly negative for tubercle bacilli.

At present there is still excellent collapse on the right with 30-40% compression and no evidence of recent disease. On the left there is now very little collapse and there is still a suggestive cavity present. This side began to obliterate soon after the operation and thoracoplasty will be necessary.

Miss C. McA. Admitted: June 30, 1927.

On admission the patient gave a history dating back to June 1922 when she had dry right-sided pleurisy. In March 1924, she had three attacks of haemoptysis. She was sent to a Sanatorium (The Rutland Sanatorium) where disease was found in both apices. She had taken the cure since then and had four small haemorrhages in 1926. On admission she had a slight hoarseness, a cough and sputum, Gaffky IV.

She was diagnosed moderately advanced R_3L_2 with a complication of tuberculous laryngitis. At this time she had scattered infiltrations in both lungs. While at the Sanatorium she was put on rest treatment but there was definite extension and she was discharged on June 2, 1928, as far advanced R_3L_2 , unimproved.

She was re-admitted on October 3, 1928, far advanced R_3L_2 . On February 16, 1929, a pneumothorax was initiated on the left, and on February 20, 1929, one was also initiated on the right. However, they were both discontinued in May because the right side became inoperable and the left side was discontinued because of progressive disease. She was discharged on December 15, 1930, unimproved.

She was re-admitted on September 14, 1932, as far advanced, slight activity, no extension. She gave a history of curing faithfully at home but with a persisting cough and 2 ounces of sputum (Gaffky VII) and a history of streaking. At this time, the right side showed chronic lesion with a small cavity in the apex and the left side showed a chronic caseous fibroid lesion. Due to extension on the left side in 1933, a phrenicotomy was performed on the left on October 10th, 1933, with eventual elevation of the diaphragm

amounting to 4 cm. She was discharged on July 3, 1935, as improved but had had frequent haemoptysis and streakings while in Sanatorium.

She was re-admitted on August 27, 1935, as far advanced with extension and activity. While at home she had had several haemorrhages, and still had 2-ounces of sputum (Gaffky IV). She continued showing no great change with slight extension and reactivation at times and X-ray on July 19, 1938, showed disease and honeycomb cavitation in the right apex and to the 2nd rib on the right. On the left, there was also honeycomb cavitation in the apex and 1st I.S. with the disease down to 3rd I.S.

At this time it was decided to do a bilateral extra-pleural pneumothorax. The upper portions of both lungs were involved, and thoracoplasty was too extensive a procedure and would reduce the vital capacity too much.

On September 27, 1938, an extra-pleural pneumothorax was performed on the left side and on November 25, 1938, a similar procedure was performed on the right side. As a result, there was at first an 80-90% collapse of the left lung and good compression of the right. At present there is a 30% collapse of the right lung and 40-50% collapse of the left lung. No cavities are seen. She has only a slight cough, one ounce of sputum (negative for tubercle bacilli) and her strength and appetite have greatly improved. She has not had any haemoptysis or streaking since the operations.

T. F. Admitted: May 6, 1937.

On admission the patient gave a history dating back to one year previously. She had been admitted to St. Martha's Annex at Antigonish on July 27, 1936. She suffered from loss of strength, weight, and appetite, hoarseness, a cough and eight-ounces of sputum, dry pleurisy on both sides on frequent occasions and repeated haemoptysis and streaking. Her sputum was Gaffky IV.

She was diagnosed as far advanced R₂L₂. A pneumothorax had been initiated on the left side at St. Martha's on November, 1936. On admission there was a fairly recent scattered tuberculosis to just below the 3rd rib with a small cavity on the right and on the left there was a 20-30% pneumothorax with a cavity opposite the 3rd rib. The left pneumothorax was continued at the Sanatorium and on May 22, 1937, a phrenicotomy was done on the left side with resultant elevation of the diaphragm amounting to 3 cm. This closed the cavity.

On October 1, 1937, there was noted definite extension and reactivation on the right side with a cavity of 2½ x 3 cm. and 30-40%, chiefly basal, collapse on the left. Therefore a pneumothorax was initiated on the right on October 21, 1937. At this time her temperature was 99.8-100°. By March 1938, there was a 40% collapse of the right lung but a cavity 2½ x 3½ cm. was still present due to adhesions. The left side showed slight clearing. Due to recent disease in the right lung it was decided to re-expand it and do an extra-pleural pneumothorax and to continue the pneumothorax on the left.

By May, 1938, the right lung had completely re-expanded and showed a thick-walled cavity measuring 3 x 2¾ cm. The left lung showed a 40% collapse mainly basal and an elevation of the diaphragm of 7 cm. A right extra-pleural pneumothorax was performed on June 14, 1938, with resultant good collapse of the upper lobe. Her sputum was negative at this time and her patient's general condition improved greatly. Refills of air in the extra-

pleural pocket were given regularly but despite high positive pressures, up to 16, the lung re-expanded on this side and the cavity re-opened. Therefore it was decided to superimpose a thoracoplasty since the left lung with 30% collapse was doing well and the patient's general condition was good.

On September 21, 1938, the first stage was performed with removal of the upper three ribs and an apicolysis was done. On October 7, 1938, the 4th and 5th ribs were resected with resultant good collapse and disappearance of the cavity. The patient was discharged on May 24, 1939, quiescent, with no sputum or other symptoms.

Her last check-up on September 30, 1939, showed good collapse with satisfactory healing and no cavity on the right and 20-30% collapse and no cavity and good elevation of the diaphragm on the left. She has no symptoms and is increasing her exercise.

Hodgkin's Disease

C. BRUCE BROWN, M.D. Hilo, Hawaii, T.H.

DR. HODGKIN, an English physician, in 1832 collected a series of cases with large spleens and palpable lymph nodes. To this entity has been given his name.

Synonymous terms with Hodgkin's disease are: pseudo-leukemia, lymphoblastoma, generalized lymphadenoma, and lymphogranulomatosis.

Hodgkin's disease is a slowly progressing, painless enlargement of lymph nodes and spleen. The nodes do not tend to suppurate.

Etiology.

The etiology of Hodgkin's disease is still a matter of dispute. There are two schools, one maintaining that it is a new growth, their views being supported because it cannot be transmitted to animals. The other, that it is an infectious granuloma closely allied to tuberculosis.

Hodgkin's is a rare disease affecting all ages, both sexes, and all races and types of people.

Pathology.

It is characterized by masses of discrete lymph nodes, and in the absence of secondary infection there is no suppuration or adenitis. A characteristic picture of a microscopic section shows Sternberg-Reed cells, large, usually multinuclear cells formed from proliferating endothelial cells; eosinophiles; increased reticuloocytes; fibrosis; the gland capsule is usually normal.

The disease observes no rule of procedure, but most generally begins in the cervical region from where it tends to spread, infiltrating the mediastinum. All glands may be involved as suggested by the name generalized lymphadenoma. The gastro-intestinal tract, thyroid, central nervous system, skin, and skeletal system may also be affected. The genito-urinary system is rarely involved.

Diagnosis.

The clinical physical diagnosis is not easy owing to the similarity presented by other diseases. The diagnosis is made by pathological examination of a section of gland, which presents a picture as described above.

Gordon's Test: This test has recently had much publicity. It is performed by removing and grinding a lymph node to a pulp under aseptic conditions, adding ordinary broth with a pH of 7.2. This is allowed to stand twelve hours in a refrigerator. 0.4 c.c. are injected into a rabbit's brain, and 0.6 c.c. into the marginal ear vein. If in one week there develops spastic paresis, rigidity, and ataxia, it is positive for Hodgkin's disease. The reliability of this test, however, has been discredited by Earle M. Chapman¹, who, after a series of tests made with material obtained from sixteen proven cases, concluded that the Gordon test, if positive, is only supportive aid in diagnosis of Hodgkin's, and if negative does not exclude the disease. Later Joseph C. Turner and Henry Jackson, Jr.² of Boston, after a series of experiments showed that the potency of suspensions to produce the characteristic paralysis

in rabbits or guinea pigs varied directly with the number of eosinophiles present. Further, that suspensions of blood from persons having a high degree of eosinophilia, but not suffering from Hodgkin's disease, also gave a positive reaction. These authors concluded that Gordon's test is positive only because of the presence of eosinophiles.

Differential Diagnosis.

Hodgkin's disease must be differentiated from the following diseases: (1) Tuberculosis; (2) Adenitis; (3) Lymphosarcoma; (4) Lymphatic leukemia; (5) Chronic lymphadenitis; (6) Syphilis; (7) Acute infectious mononucleosis; (8) Cancer.

Treatment.

Hodgkin's disease is an inevitable fatal disease in which surgery plays no role. Roentgen therapy is the agent of choice.

Harold W. Jacox, Carlton B. Pierce, and Roscoe H. Hildreth³, of the University of Michigan, surveyed the clinical results of irradiation in 161 cases treated within the past decade. 58 had received repeated local irradiation; 50 had been irradiated over the entire lymphatic system; and 53 had only one or two local treatments. 54 untreated patients were used as controls. Recession of adenopathy occurred in about the same percentage in the first and second groups. Some patients of group one, whose condition became refractory to repeated local treatments, showed definite improvement when given general irradiation. The clinical course of the untreated cases was generally down hill. It was concluded that there were no unfavorable biologic changes following irradiation, and that Roentgen therapy, even in small amounts, definitely extends life, as compared with survival of untreated patients.

Case Report.

Case No. 23651, Hilo Memorial Hospital, Hilo, Hawaii, T. H.

J. M., Portuguese male, age 23 years, laborer.

The patient was first seen on September 5, 1939. He had always been well, except for a moderately severe attack of parotitis during childhood. He stated that for the ten months previous to September, 1939, there had been an increasing swelling in the right side of the neck; loss of weight, strength and appetite; tendency to contract "chest colds", associated with severe cough. These colds would disappear in a few days leaving no residual cough.

Family and personal history were essentially normal.

Pertinent physical findings were evidence of marked loss of weight; toxemia; there was a mass of discrete non-tender, firm, freely movable glands in the right supraclavicular fossa varying in size from small marbles to hen's eggs. A single palpable gland was present in the left supraclavicular fossa. The overlying skin was not involved. The arms, shoulders, and body were covered with irregular, brown pigmented areas, which the patient stated had been present for one year. The thyroid, axillary, inguinal, and epitrochlear glands were not palpably enlarged. The abdomen showed no post-operative scars or hernias. The liver, spleen, kidneys were not palpably enlarged or displaced. The heart, lungs, abdominal, rectal, and central nervous system examinations were essentially normal.

Laboratory.

Urine and stool examinations were negative. There was a moderate secondary anaemia, and a leukocytosis of 15,000. The differential blood count was normal. Blood Wassermann and Kahn were negative. Intracutaneous tuberculin test was negative to 0.0005 mgms. P.P.D. X-ray examination showed the lung parenchyma normal. The diaphragm was regular. There was no fluid in the costo-phrenic sinuses. The mediastinum was grossly irregular and enlarged. There were numerous enlarged lymph nodes around both hiluses, extending bilaterally into the para-aortic region. Lymphatic and perivascular markings were increased throughout the parenchyma of both lungs.

Biopsy from cervical gland, obtained by local anesthesia, showed entire loss of architecture of normal lymph gland. The cellular portion consisted of masses of cells of varying size. There were large numbers of endothelial cells, frequently multinuclear, of the Reed-Sternberg type. Portions of the slide showed large numbers of eosinophiles. The remaining cells were apparently of the lymphoid type, and varied somewhat in size. Fibrosis was moderate with scattered areas of vascularization. On Ziehl-Neelsen stain no acid-fast bacilli were seen. Inoculation of guinea pig was negative for transplant of Sternberg-Reed cells. There were no giant cells typical of tuberculosis. A direct smear and culture from the sectioned gland was negative for bacteria, fungus, and mycelium. A diagnosis of lymphosarcoma, Hodgkin's type, was made.

Clinical Course.

The patient ran a septic temperature with daily fluctuations ranging from normal to 102° F., elevation peaks occurring in the evenings. This continued regularly until the thirteenth day after admission, at which time he was started on a course of Roentgen therapy to the cervical glands and mediastinum. On the fifteenth day (after the third irradiation) the temperature returned to normal and remained so throughout the remainder of hospitalization. There was an immediate and marked reduction in size of the irradiated cervical and mediastinal lymph glands, associated with a general clinical and physical improvement. There was an approach to normal in the blood picture, the white blood count dropped from 20,000 to 5,600; the red blood count rose from 3,440,000 to 4,330,000; and there was an increase in hemoglobin from 50% to 65% (Sahli). The irregular, pigmented areas over the thorax and extremities gradually disappeared. There was a marked increase in appetite and strength, and a steady and regular gain in weight, 42 pounds in 72 days, or more than an average of 1/2 pound daily. Three months after hospital admission, the patient presented a picture of clinical cure, and had returned to his former normal activity, doing a full day's work of heavy manual labor without any abnormal fatigue or other disability. He was taking no medication and his weight and strength continued to improve.

Roentgen therapy administered was as follows:

To right supraclavicular fossa	560 r. units.
To left supraclavicular fossa	300 r. units.
To mediastinum (portal, posterior interscapular region).	1140 r. units.

All dosage units measured in the air. When treating the cervical region the rays were directed toward the superior mediastinum. The technique was Kv.P. 120, Ma 5, filters: Al 1 mm., Cu. 0.25 mm., anode skin distance 50 cm. The total course comprised eleven treatments given between the dates of September 18th and October 20th, 1939.

There was a complete disappearance, both visibly and palpably, of the cervical adenopathy. Roentgenograms of the thorax taken September 5th, October 6th, October 27th, and December 1st, 1939, showed a progressive, marked reduction in size of the mediastinum and disappearance of glandular masses. The heart and great vessels were of normal size, position and contour.

While at the present time the patient presents a picture of clinical cure, he is doomed to inevitable return of symptoms. No generalized irradiation of the lymphatic system was carried out as at no time were lymphatic glands, other than the cervical and mediastinal, demonstrably enlarged. It was considered a better policy to accept the marked clinical improvement and to observe the patient for any remission of symptoms, rather than to extensively irradiate with the probability of rendering him refractory to further treatments.

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Haemolytic Anaemia

JOHN B. REID, M.D., Truro, N. S.

THIS is a report of the subsequent history, treatment and progress of a case reported by Dr. Holland of Halifax in the May 1937 BULLETIN.

Dr. Holland based his diagnosis of probable Haemolytic Anaemia on the following points.

1. Repeated attacks of abdominal pain, tenderness and vomiting.
2. Icterus (Haemolytic type).
3. Hypochromic microcytic anaemia.
4. Reticulocytosis.
5. Increased fragility of the red blood cells.
6. Negative findings in the G. I. Tract, G. U. Tract, vertebral column, and other systems.

Female aged 28, admitted to Col. Co. Hospital Dec. 28, 1938.

History. Since the attack in Halifax she has had numerous minor crises lasting a few days to a week. She was treated practically all the time with Liver Ext. (anahaemin) 1 c.c. about every two to four weeks. This did seem to keep her up somewhat. In all the attacks since the first she has had no pain of consequence in the left side, but the discomfort was in the epigastrium, more marked over the edge of the liver and gall-bladder region with tenderness. The first attack in which I saw her was so similar to gall-bladder pain that a diagnosis of Cholecystitis (with or without calculi) was justifiable. Subsequent attacks were similar. In view of the operative findings (i.e. stones in the G.B.) it is altogether probable that the pain was due in part to the gall-bladder disease.

It is well proven now, I think, that 60%-70% of cases of haemolytic jaundice have diseased gall-bladders, with or without stones which contain bilirubin and perhaps cholesterin. The bile becomes dark and muddy, and if the condition persists the liver becomes damaged.

Present Attack: She was taken acutely ill about 10 days before admission, with severe headache, pain in back of neck and discomfort in the epigastrium, more marked on right side below right costal margin. She vomited a number of times, felt weak and nauseated, no appetite. Thinking she had an attack of "stomach flu" (whatever that is) which she heard of others in Truro having, at that time, she didn't call me until she was quite ill. This attack was much more severe than any previous one, and reduced her to an alarming condition in the ten days of illness.

Examination: Appears acutely ill. Icterus and pallor. Temperature 102, Pulse 110, and Respiration 22.

Abdomen—marked tenderness all over epigastrium, more pronounced in the gall-bladder region, rigidity of abdominal parietes, more marked on right side. The spleen palpable and tender (the first time the spleen has been palpable).

Urinalysis—S.P.G. 1014, trace albumen, trace sugar. Fifteen pus cells per H. P. field, few blood cells (not a catheter specimen).

There was soreness in muscles back of neck with definite rigidity and pain on flexion. Spinal fluid examined on this account and found normal.

Blood Picture: Hb. 24%, R.B.C. 896,000. Color index 1.5%. W.B.C. 22,800. Marked anisocytosis, slight poikilocytosis, marked hypochromia.

In view of past history, Dr. Holland's thorough blood study (particularly reticulocytosis and increased fragility of red cells), palpable, tender spleen, icterus, and the sudden definite crisis the diagnosis seemed well established.

Treatment: It appeared that in order to cure the condition a splenectomy was inevitable. In view of her serious condition, however, it was thought advisable to treat expectantly for a time. Vomiting had ceased. She was put on liver ext. 1 c.c. daily, and all the fluids and nourishment she would take. At the end of a week her temperature became normal, her headache and epigastric discomfort disappeared and she felt much better. The blood at this time Jan. 7, showed R.B.C. 2,390,000. Hb. 50%. W.B.C. 9,550. The spleen continued palpable and tender.

On Jan. 28, R.B.C. 2,000,000. Hb. 68%. W.B.C. 6,500. As no further improvement seemed likely, we decided to do a splenectomy, which was done on Feb. 11.

Operation: Splenectomy: Incision through left rectus, $1\frac{1}{2}$ inches from midline. The omentum was slightly adherent to spleen and spleen firmly to diaphragm. Separation of adhesions produced some bleeding which was controlled by hot pads. The pedicle was securely ligatured with chromic calcut No. 1 in two places and spleen removed.

The gall-bladder was quite accessible and contained some stones about the size of small peas. It was thought inadvisable to remove gall-bladder at this time. The liver was well below costal margin. The recovery was uneventful.

At the end of one week the R.B.C. were 3,700,000. W.B.C. 7,000. Hb. 77%. She was discharged from the hospital March 12, feeling fine with R.B.C. 4,000,000. W. B. C. 7,850. Hb. 80%.

She has had no further symptoms, feels and looks perfectly well with a normal blood picture. She never felt well, but always tired, dull and lethargic since her original attack.

I felt that complete recovery would probably not come about until her gall-bladder was operated on, but she has had no trouble whatever to date.

This report only verifies many other instances of the spectacular recovery in these cases after Splenectomy.

A Doctor of the Old School

M. R. ELLIOTT, M.D., Wolfville, N. S.

THERE can be only one Doctor Maclure of Drumtochty. Rugged, reserved, sensitive, steadfast as his native hills, he lives forever in the hearts of all whom he touched. We owe much to the Scottish tradition yet devoted men everywhere have made a pattern in the practice of medicine which time shall not entirely alter or efface. Such a one is the subject of my sketch. . . Dr. Henry Chipman of Grand Pre, who for fifty years gave his life to the countryside in which he elected to work.

It is in the nature of rural practice that it tends to develop a man's true character. For some it affords the opportunity, perhaps in a limited way, to acquire for themselves; to others it means the expression of a life in terms of general public service. This was particularly true in the past generation or so but may and does continue in our country districts at the present time. For them the art of living and the art of the practice of medicine became blended. Difficulties did not daunt them. They accomplished much because they had great courage. Responsibility had to be borne alone. Diagnosis could not wait for the confirmation of the laboratory or the opinion of a confrere, yet they rarely became dogmatic. The struggle singlehanded with the issues of life and death engendered a humanity which might well be emulated by those of our day. The patient and his interests were only to be considered. Anything which smacked of chance or experiment was ruled out. Thus the philosophy gained by working so intimately with nature, by the more leisurely consideration of the issues involved, and by the confidence which they engendered and deserved from their patients, had a fruition in a ripeness of character which is exemplified in many old doctors of our acquaintance.

Henry Chipman came from a distinguished Kings County family, his father being one of the early representatives of the County in the Federal Parliament. He spent some time at the old school at Hortonville, conducted by A. McNab Patterson, before he went to Kings College at Windsor. On his graduation there he entered the Harvard Medical School, from which he graduated in 1868. No doubt the pleasant hills with the sunlit marshes and dykelands to the northward, of his boyhood schooldays, made a strong appeal, for we find him shortly afterward settled in Grand Pre.

In 1760 there had come to Grand Pre a group of planters who took up the lands from which the Acadian French had been recently dispossessed. They were of progressive stock and became much attached to their new homes. In the time of Dr. Chipman his near neighbors were the Cranes, Dennisons, Lairds, and Bordens. The next house was the old home of Levi Borden, the father of Sir Robert Laird Borden.

In November 1789 a Society for the promotion of agriculture was formed in Halifax but was apparently very shortlived. On December 10 of the same year the Kings County Agricultural Society was organized with a continuous subsequent history. The wide purpose of the Society was declared to be "the better improvement of husbandry, encouragement of manufacturers,

cultivation of the social virtues, acquirement of useful knowledge and to promote the good order and the well being of the community to which we belong." It thus became the first Society of the kind in North America. It is notable that for years it made a definite contribution to practical cooperative effort. This was seen in group action in purchasing, pursuit of their seasonal work and the sale of their products. Halifax was their best market and in the sale of cattle for instance we find this conducted by allotment through the Society's representatives.

Between 1870 and 1890 this Society was in a flourishing state with Dr. Chipman as Secretary. In 1854 another physician, Dr. Charles Hamilton of Canard, had been appointed president of a sister society, the Fruit Growers' Association. He continued in this office and the two societies united in a campaign for the extension of agriculture. It was largely due to the combined efforts of their members that the apple industry in the Annapolis Valley reached its present magnitude. The minutes of the Society from Dr. Chipman's pen show the zeal and enthusiasm with which he was forwarding the work. In 1885 we find in his minutes a dissertation on the merits of oatmeal as a staple in the diet.

Unfortunately the mountain districts adjacent to Grand Pre had not been settled by the good stock from the colonies. Probably through the Port of Halifax a number of people of a lower standard of living as well as of a sub-standard range of intelligence, came here about the last of the 18th century. This group, then as now, constituted a social problem. Among them Dr. Chipman labored with an especial devotion. He never failed them. Following an especially distressing case in 1912 he was instrumental in the formation of branch of the Children's Aid Society of Nova Scotia.

He was a true horse and buggy doctor. A recent autobiographer has styled himself thus but the expression was only true as used by him to represent the pioneer phase through which medicine has passed. The Grand Pre doctor loved a good horse and always drove one. Through storms and difficulties which might give the modern columnist some cause to wax eloquent he and his faithful steed found their way. Much of his dispensing was done from his conveyance. The limitations of his work made him skilful and resourceful. I had occasion to observe his use of opium and its derivatives, especially in the treatment of pneumonia.

Always a wise counsellor he had no sympathy with sham or deceit. Terse and direct he reached the heart of any matter in the shortest time. To the local church he was a veritable pillar of strength. On occasion he could occupy any of the offices, even to the pulpit. In the local temperance society he was the strongest advocate. He promoted the idea of temperance and entertainment to the end that the society might become a literary and social gathering for the community.

In the local school he maintained a sustained interest, serving as trustee for years. During the existence of the Acacia Villa School he was a constant visitor, watching the health of the boys withal.

It never seemed that he was particularly vexed by the perturbing problem of pecuniary reward. I know that he was grossly imposed upon. However an occasion arose at the latter part of his career when all scores in a measure might have been compensated. The district was in the process of electing a municipal councillor and all agreed that here there was an opportunity to

publicly recognize the old doctor. Friends in both political groups urged him to accept a nomination which he did gratefully with the understanding that he would have no further concern. The days passed and he went about his work. In the meantime the party flag was waved and another candidate was nominated. Election day came and when the votes were counted there were actually less for him than were regularly polled by his party in other contests. Bitterly hurt, he wavered in his loyalty to those who had failed him. However, deep in his heart he knew that he was truly appreciated by many.

In January 1919 he fell victim to the epidemic which was beginning to scourge our province.

It seemed to us that he had lived a good life and a full one.

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It is to be distinctly understood that the Editors of this Journal do not necessarily subscribe to the views of its contributors, except those which may be expressed in this section.

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APRIL, 1940

No. 4

Sulphanilamide in Acute Otitis Media.

CLINICAL observation in conjunction with the laboratory aids have now placed us in a position to sit in judgment on sulphanilamide—to praise its virtues and to denounce its vices. Otologists have been more or less suspicious of this remedy for some time and with the passing months vague suspicion is becoming hardened into the firm conviction that in acute otitis media it is a dangerous drug. A very renowned teacher at the meeting of the American Academy of Ophthalmology and Otolaryngology last October urged his listeners to go forth as missionaries—the very word used—to the paediatricians, (apparently the chief sinners in his experience) and to convert them as it were to sulphanilamide free lives. God forbid that I should discriminate in like manner when addressing my esteemed associates of the Medical Society of Nova Scotia, but rather that my remarks be punctuated by a spirit of inclusiveness that would consider all of us as being in need of conversion.

Our colleague, Dr. R. H. Stoddard, has had several unhappy but highly instructive experiences and was good enough to give me the following case report for textural purposes.

A male, aged 23, was admitted to hospital on January 29th, with temperature of 101.5°, and gave a history of having had a "cold" for about two weeks, and that his *left* ear began to ache and throb four days previously, and began to discharge a few hours before admission. On examination the following day, January 30th, it was found that both ears were discharging, at which time it was difficult to recognize the normal landmarks, and the temperature was 102.5°. Prontylin, 45 grs. per diem with soda bicarbonate was prescribed and although the temperature continued for five days it never rose above 101.5° and was normal on the seventh day. Sulphanilamide was continued and at the end of the second week the right ear was dry and the left was reduced by the 18th to not much more than a little moisture. His discharge from hospital was arranged for the 20th. On the 19th, at 5 p.m., he complained of some indefinite pain about the left mastoid area.

The presence of tenderness even on firm pressure, was uncertain. The temperature, pulse and respiration were normal. An X-ray was ordered in a placebo-like spirit. Six hours later he vomited, became irritable and shortly afterwards lost consciousness. An operation was performed the following morning and the mastoid bone was found to be only slightly congested and of the diploetic type. The inner table overlying the lateral sinus appeared to be normal, but the sinus wall when uncovered was collapsed and on exploration its lumen was occupied by an extensive and far advanced infected clot. A lumbar puncture was performed at this time and showed the spinal fluid to be under great pressure and very cloudy. Subsequent examination of the infected clot and fluid showed a pure growth of the streptococcus haemolyticus.

This curious state of affairs, that is apparent recovery in the presence of progressive disease, is known among aural surgeons as the "masking" effect and requires little imagination to appreciate its gravity when remembering that an abscess in the ear is an abscess in one of the most potentially dangerous situations in the body.

Converse,¹ in reporting on their experience at the Massachusetts Eye and Ear Infirmary presents a series of cases in which it appears likely that the premature cessation of sulphanilamide therapy was followed by a recurrence and extension of the original infection.

The extraordinary success of sulphanilamide in the treatment of streptococcal otogenic meningitis has led to the widespread use of the drug in all cases of otitic infection in which the beta-haemolytic streptococcus can be identified. Such enthusiasm for specific chemotherapy is readily understood but is open to considerable criticism. The patient with meningitis is under hospital observation, and treatment is continued until the spinal fluid has returned to normal. The patient with acute otitis media or mastoiditis receives sulphanilamide only as long as there is persistent pain or discharge, and treatment is usually stopped on clinical instead of laboratory evidence.

It has been shown that the sulphanilamide treated animal survivors of haemolytic streptococcus infection fail to acquire protective antibodies as a result of their experience.² Lyons³ has demonstrated that sulphanilamide induces an attenuation of the virulence of haemolytic streptococci and that the organisms regain their virulence on subcultivation in the absence of sulphanilamide. He has further shown that antibacterial antibody is an important adjunct to sulphanilamide therapy. These facts are important because they demonstrate that inadequate sulphanilamide therapy or premature discontinuance of the drug may permit the infecting streptococci to become fully virulent again in a patient who has no immunity to his infection.

Bacteriologic sterility of the inflammatory process is evidenced by:

1. Absence of streptococci and pus cells in smears from the site of infection.
2. Absence of streptococci in cultures made by planting swabs in 10 cc. broth. (It is necessary to dilute the exudate in broth to overcome the bacteriostatic effect of the drug.) Cultures should be repeated from three to five days after discontinuation of sulphanilamide therapy and prior to discharge of the patient. A word of caution is given as to the interpretation of blood cultures from patients receiving sulphanilamide. Negative cultures may be reported because the blood is planted in a quantity of culture broth inadequate to dilute the drug beyond the bacteriostatic concentration

1. J.A.M.A., Oct. 7, 1939, p. 1383.

2. Seastone, C. V.: The Effect of Sulphanilamide (Para-Aminobenzene-sulphonamide) on Group C Haemolytic Streptococcus Infection, *J. Immunol.* 33: (Nov.) 1937.

3. Lyons, Champ, and Ward, H. K.: Studies on Haemolytic Streptococcus of Human Origin: I. Observations on the Virulent, Attenuated, and Avirulent Variants, *J. Exper. Med.* 61:515 (April) 1935; 2. Observations on the Protective Mechanism Against the Virulent Variants *ibid.*, 61:531 (April) 1935. Lyons, Champ, and Mangiaracine, A. B.: The Effect of Sulphanilamide on Human Virulent Haemolytic Streptococci, unpublished date. Lyons, Champ, in Symposium on Sulphanilamide read at a Wednesday meeting at the Massachusetts Eye and Ear Infirmary.

present in the blood. This "masking" effect may lead to oversight of a complicating endophlebitis that merits jugular ligation or further surgical drainage.

The clinical experience with sulphanilamide at the Massachusetts Eye and Ear Infirmary has led to the belief that sulphanilamide should be reserved for the treatment of spreading or life-endangering infections and that it should not be used as an adjunct to the usual measures for the treatment of infections of minor severity. There are three reasons for this belief: 1. Premature initiation of drug therapy has made complete clinical evaluation of the patient difficult, and progress of the infection to a complicating endophlebitis has been obscured during treatment. 2. There has been recurrence and further spread of the infection after omission of sulphanilamide in patients who had clinically appeared to be healed, so that it is clear that the use of sulphanilamide necessitates fairly extensive laboratory studies to confirm the clinical impression of subsidence of the infection. 3. The amount of sulphanilamide required to sterilize a focus of infection is so large that the danger of toxic manifestations necessitates the hospitalization of all patients receiving the drug.

In short it amounts to this—that it is probably wiser to keep this powerful remedy in reserve until such time as the primary site has been eliminated by a mastoidectomy either for the mastoiditis *per se* or preliminary to the treatment of a suspected complication.

H. W. S.

Maritime Conference at Moncton, N. B. April 29th and 30th

AT the suggestion of Dr. T. C. Routley, the General Secretary of the Canadian Medical Association, a conference has been arranged at Moncton, N. B., on the afternoon and evening of April 29th and the morning of April 30th, of representatives from Nova Scotia, Prince Edward Island and New Brunswick. The chief purpose of the meeting will be a discussion on Medical Economics. From the Canadian Medical Association there will be present the President, Dr. Frank S. Patch; the Chairman of General Council, Dr. T. H. Leggett; Mr. Hugh H. Wolfenden, the consulting actuary of the Canadian Medical Association, and the General Secretary, Dr. T. C. Routley. Other matters of interest to the three Maritime Provinces will undoubtedly come up for discussion.

All Members of the Medical Society of Nova Scotia are Invited to Attend.

It will undoubtedly be worth our while to hear Mr. Wolfenden and get his advice on such questions as Health Insurance, State Medicine, Contract Practice, Medical Relief and Co-operative Medicine. There has been no place of meeting decided on yet, but I presume that the meetings will be held at the Brunswick Hotel. The letter published below, together with the proposed agenda, further explain the nature of the conference.

H. G. GRANT,
Secretary.

"184 College Street,
Toronto 2,
April 6th, 1940.

Doctor H. G. Grant, Halifax, N. S.
Doctor J. R. Corston, Halifax, N. S.
Doctor A. S. Kirkland, Saint John, N. B.
Doctor W. E. Gray, Milltown, N. B.
Doctor E. S. Giddings, Charlottetown, P. E. I.
Doctor W. J. P. MacMillan, Charlottetown, P. E. I.

Dear Doctor Grant:—

As will be seen from the superscription, this letter is being sent to the Executive Committee member and the Divisional Secretary of each of the three Maritime Divisions in the C. M. A. I am now in a position to advise you as follows:

All three provinces have concurred in the proposal that a Maritime Conference be held in Moncton on Monday and Tuesday, April 29th and 30th. It is understood that each Division will arrange to send a certain number of delegates. As the Conference is informal and without any constitutional authority whatever, the relative number of delegates from each province does not matter, excepting to say,—the more the merrier and the happier we will be.

You will be glad to know that Mr. Hugh H. Wolfenden, consulting actuary of the Association, has agreed to be present, and I do not think I am overstating the fact when I say that his presentation with the discussion which will unquestionably follow, will alone be well worth the cost and effort entailed in being present.

You will also be glad to know that we hope the President, Dr. Frank S. Patch of Montreal, and the Chairman of General Council, Dr. T. H. Leggett of Ottawa, will be among those present.

Having had the privilege of attending the first and only Maritime Conference of this character, held in Moncton in March, 1927, and remembering the many benefits which accrued from that Conference and which, indeed, have been with us ever since, I am looking forward with keen personal pleasure to this next gathering.

Looking up train schedules, it is observed that, with Moncton as a focusing point, from the East, South and West trains arrive in the early afternoon, the last one from the West being at 3.25 o'clock. I would suggest that we convene at say 4.15 p.m. or 4.30 for the opening session, that we dine together, and that, following dinner, we listen to Mr. Wolfenden and carry on with the Round Table discussion on medical economics as long as may be desired. With such time as may remain in the evening and with a full morning on Tuesday, we should be able to cover a lot of ground, thus permitting everyone to commence his homeward journey on Tuesday afternoon.

Thinking of physical arrangements, might I suggest to one of you—Dr. Kirkland—that he be so kind as to attend to that matter. I presume each delegate will make his own hotel reservations. Perhaps Dr. Kirkland would have a word of advice to give us in respect to that. There arises, however, the place of meeting for the Conference and also the arrangements for the Monday night dinner. The thought occurs to me that perhaps the Moncton Medical Society might like to take advantage of the presence of the conferees in Moncton and attend that dinner, having particularly in mind the advantage which would accrue to them in hearing Mr. Wolfenden speak at the evening session. In all these matters, I would suggest again to our New Brunswick delegates, particularly to Dr. Kirkland, the Secretary of the New Brunswick Division, that he make such arrangements as he thinks proper.

For your information, I am enclosing a *tentative* agenda. I say tentative because there may be a number of problems which you would like to have discussed which I have failed to include in this draft. If such be the case, please submit your suggestions soon so that a complete agenda may be drawn up prior to the meeting.

Now that the decision has been made to meet, may I express the hope that there will be a splendid attendance from all three provinces and that the results which attend the Conference will be as happy and helpful to all concerned as would appear to have been the case with respect to the previous conference.

And just a closing word—would Dr. Kirkland please let me know the local arrangements which have been made so that I may, in turn, advise you all.

With kind personal regards, I am

Yours sincerely,

(Sgd.) T. C. ROUTLEY,
General Secretary."

Tentative Agenda for the Second Maritime Conference to be Held in Moncton, N. B., on Monday and Tuesday, April 29-30, 1940.

- 1—Roll Call to be recorded by the General Secretary.
- 2—Election of Chairman.
- 3—Election of Secretary.
- 4—Brief remarks from the Officers of the C. M. A.
- 5—Discussion re places, dates and speakers for this year's annual meetings of the Division.
- 6—Medical Economics—Presentation by Mr. Hugh H. Wolfenden, to be followed by discussion.
- 7—Federation—What can be done to strengthen organized medicine not only in each of the three Maritime Provinces but in Canada as a whole.
- 8—Medical Legislation—Anything which may be of interest not only to the Provinces but to Canada as a whole.
- 9—Medical Relief—What is being done in the three provinces.
- 10—National Emergency—Discussion re medical activities in relation to the war.—Any points in which the East should be particularly interested and concerned.
- 11—Publications—From time to time, the Nova Scotia Division has suggested a wider distribution of its medical bulletins.
- 12—Radio—Observations with regard to medical broadcasts; should they be continued?
- 13—Cancer—What is being done and what could be done in this field, both within the frame work of the C. M. A. and through the Canadian Society for the Control of Cancer.
- 14—Post-Graduate Lectures—What are your arguments, if any, in favour of their resumption?

The above is to be subtracted from, added to, or changed in any way that the conferees see fit.

Have You Made Out Your Income Tax?

RETURNS BY MEMBERS OF THE MEDICAL PROFESSION

As a matter of guidance to the medical profession and to bring about a greater uniformity in the data to be furnished to the Income Tax Division of the Department of National Revenue in the Annual Income Tax Returns to be filed, the following matters are set out:

INCOME

1. There should be maintained by the Doctor an accurate record of income received, both as fees from his profession and by way of investment income. The record should be clear and capable of being readily checked against the return filed. It may be maintained on cards or in books kept for the purpose.

EXPENSES

2. Under the heading of expenses the following accounts should be maintained and records kept available for checking purposes in support of charges made:

- (a) Medical, surgical and like supplies;
- (b) Office help, nurse, maid and bookkeeper; laundry and malpractice insurance premiums. (It is to be noted that the Income War Tax Act does not allow as a deduction a salary paid by a husband to a wife or vice versa. Such amount, if paid, is to be added back to the income.)
- (c) Telephone expenses;
- (d) Assistant's fees: The names and addresses of the assistants to whom fees are paid should be furnished. This information is to be given this year on or before the 31st March, but on or before the last day of February in each subsequent year on Income Tax Form known as Form T-4, obtainable from the Inspector of Income Tax. (Do not confuse with the individual return of income, Form T. 1, to be filed on or before 30th April in each year);
- (e) Rentals paid: The name and address of the owner (preferably) or agent of the rented premises should be furnished. (See j);
- (f) Postage and stationery;
- (g) Depreciation on medical equipment: The following rates will be allowed provided the total depreciation already charged off has not already extinguished the asset value:—

Instruments—Instruments costing \$50.00 or under may be taken as an expense and charged off in the year of purchase;

Instruments costing over \$50.00 are not to be charged off as an expense in the year of purchase, but are to be capitalized and charged off rateably over the estimated life of the instrument at depreciation rates of 15% to 25%, as may be determined between the practitioner and the Division according to the character of the instrument, but whatever rate is determined upon will be consistently adhered to; The residual value of instruments not heretofore fully depreciated will be depreciated along with instruments costing over \$50.00 purchased subsequently;

Office furniture and fixtures—10% per annum;

Library—The residual value of library not heretofore fully depreciated will continue to be depreciated at 10% per annum for the years 1932, 1933 and 1934 as well as charging off the actual cost of books purchased in those years. After 1934, only the cost of new books will be allowed as a charge.

(h) Depreciation on motor cars cost:

20%, 1st year; 20%, 2nd year; 20%, 3rd year; 20%, 4th year; 20%, 5th year. The allowance is restricted to the car used in professional practice and does not apply to cars used for personal use.

(i) Automobile expense; (one car): This account will include cost of license, oil, gasoline, grease, insurance, washing, garage charges and repairs;

(Alternative to (h) and (i)—In lieu of all the foregoing expenses, including depreciation, there may be allowed a charge of 6c. a mile for mileage covered in the performance of professional duties).

If Chauffeur is employed for business reasons, so that in the result he is substantially used for business purposes (although incidentally used for personal or family use), the expense will be allowed.

(j) Proportional expenses of doctors practising from their residence—

(a) owned by the doctor;

(b) rented by the doctor;

(a) Where a doctor practises from a house which he owns and as well resides in, a proportionate allowance of house expenses will be given for the study, laboratory, office and waiting room space, on the basis that this space bears to the total space of the residence. The charges cover taxes, light, heat, insurance repairs, depreciation and interest on mortgage (Name and address of mortgagee to be stated);

(b) Rented premises—The rent only will be apportioned inasmuch as the owner of the premises takes care of all other expenses.

The above allowances will not exceed one-third of the total house expenses or rental unless it can be shown that a greater allowance should be made for professional purposes.

(k) Sundry expenses (not otherwise classified)—

The expenses charged to this account should be capable of analysis and supported by records.

Claims for donations paid to charitable organizations will be allowed up to 10% of the net income upon submission of receipts to the Inspector of Income Tax. (This is provided for in the Act).

The annual dues paid to governing bodies under which authority to practise is issued and membership association fees not exceeding \$100.00, to be recorded on the return, will be admitted as a charge.

The cost of attending post-graduate courses or medical conventions will not be allowed.

(l) Carrying charges;

The charges for interest paid on money borrowed against securities pledged as collateral security may only be charged against the income from investments and not against professional income.

(m) Business tax will be allowed as an expense, but Dominion provincial or municipal income tax will not be allowed.

Professional Men Under Salary Contract

(3) The salary of professional men will be taxed without any deduction therefrom except as hereunder provided unless the individual is under contract which requires of him, in order to maintain his contractual position to operate a motor car of his own, in which case if the principal does not pay the upkeep, running expenses and depreciation, the individual will be allowed to reduce the salary by such expenses as the use of the car in the earning of his income may cost, on the same basis as above provided for, i.e. expenses and depreciation or alternatively 10c. a mile for mileage covered in the performance of professional duties.

The annual dues paid to governing bodies under which authority to practise is issued, and membership association fees, not exceeding \$100.00 to be recorded on the return, will be admitted.

Correspondence

Annapolis Royal, N. S.,
April 6, 1940.

Editor Nova Scotia Medical Bulletin,

Dear Sir:—I don't know whether it may be of any importance now to refer to the possible education of the late Dr. Benjamin Sterns about whom there was a paragraph in the BULLETIN for March, but as I happen to be one of his grandsons, it may be no harm to state a few facts concerning his record as I have learned them from my parents and evidence in my possession. I happen to have his license to practice medicine which was given in New Hampshire where he was born in 1768, and I have been told studied some time with Dr. Johnson who was the original maker of Johnson's Anodyne Liniment. I have also his old dictionary, Ash's Dictionary, published in England in 1775 and upon the fly leaves of which is some of his penmanship and records. Also I have his old copper mortar and pestle in which he used to compound his drugs. I also have a set of Oxford Encyclopedia of 1800 which may have been used by him. However, I am quite sure that Dr. Ben did not go Truro in 1804 on his way to Antigonish. He and his family went in a schooner from some port in New England direct to Antigonish where his wife's brother, of the name of Symonds, had already settled and persuaded the Doctor to also settle as there was then no physician in that part of the Province. The first winter they lived in a log house, caulked with moss between the logs, which was the house-building fashion in those days, and the following summer he imported by vessel from New Hampshire the frame for the first frame house in Antigonish the site of which was pointed out to me by an old resident not a great many years ago. I was told that it was quite a large two and a half storey structure with massive brick chimneys. It was because of lack of educational facilities for his family that Dr. Sterns moved from Antigonish to Truro a few years later and found himself among some old friends from New Hampshire, the Blanchards, Witters and others. The village of Truro was at that time all on Bible Hill and mostly on the curve of the road over the hill from the river to Onslow. It was there that Ezra Witter had his carriage building shop in which two of the Doctor's sons, Henry and Benjamin, learned their trade after getting all the schooling they could, and on the death of their mother in 1826 moved to Pictou, where they started carriage building on their own account and the Doctor lived with them and practised medicine in Pictou until his death in 1850. It was Ezra Witter who built the first four-wheeled vehicle that ever travelled between

Truro and Halifax, and my father drove it, establishing a stage line with headquarters in Halifax at Doran's Hotel, opposite the end of Bedford Row (on Sackville St.) and crossing the harbour in a team-boat, propelled by horses on a round, before the days of the steam ferry. That would be about 1825 or '26. The road went from Dartmouth up along the lakes and it was a long ride of sixty miles in a day.

Yours very truly,
 J. W. DAWSON STEARNS.

There is, in Savary's History of Annapolis County, reference to one Benjamin Stearns who came from the States earlier than the Doctor, but it is another individual. Dr. Stearns was descended from a very old English family, the crest on whose coat-of-arms is yet the figure of a "stearn", the obsolete name of the English starling, and the motto "Sustenet" or "Sustenebit." There was a mention in an old letter that the Doctor may have come to Nova Scotia so that some of his family might be born on British soil as he was, in order to comply with something or another about the heritage.

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 Mepy).

Those physicians wishing to make use of the free diagnostic services offered by the Public Health Laboratory, will please address material to Dr. D. J. MacKenzie, Public Health Laboratory, Pathological Institute, Morris Street, Halifax. This free service has reference to the examination of such specimens as will assist in the diagnosis and control of communicable diseases: including Kahn test, Widal test, blood culture, cerebro spinal fluid, gonococci and sputa smears, bacteriological examination of pleural fluid, urine and aces for tubercle or typhoid, water and milk analysis.

In connection with Cancer Control, tumor tissues are examined free. These should be addressed to Dr. R. P. Smith, Pathological Institute, Morris Street, Halifax.

All orders for Vaccines and sera are to be sent to the Department of the Public Health Metropole Building, Halifax.

Province of Nova Scotia Division of Vital Statistics
Provisional Monthly Report—February 1940

	February 1940				Feb., 1939
	Total	Male	Female	Rate	Rate
No. of live births.....	867	454	413	20.0	19.6
No. of stillbirths.....	25	13	12	28.0**	34.1**
No. of deaths.....	528	287	241	12.2	13.4
No. of deaths under 1 year of age.....	88	54	34	101.5*	81.5*
No. of deaths from puerperal causes.....	4	...	4	4.6*	4.9*

Causes of Death	Int. List No.	February, 1940				Feb., 1939
		Total	Male	Female	Rate	Rate
Measles.....	7	1	1	..	.....	.....
Scarlet Fever.....	8	1	1	..	2.3	4.8
Whooping Cough.....	9	8	5	3	18.4	2.4
Influenza.....	11	20	8	12	46.1	85.6
Infantile Paralysis.....	..	..	..	..	.....	.....
Cerebro Spinal Meningitis.....	..	..	..	..	.....	.....
Pulmonary Tuberculosis.....	23	30	12	18	69.1	59.5
Other forms of Tuberculosis.....	24-32	6	3	3	13.8	11.9
Cancer and other Malignant tumors.....	45-53	49	25	24	112.8	145.1
Cerebral hemorrhage, thrombosis and embolism.....	82	27	14	13	62.2	209.3
Diseases of the Heart.....	90-95	96	49	47	221.1	228.4
Diseases of the Arteries.....	96, 97 99, 102	50	22	28	115.2	209.3
Pneumonia (all forms).....	107-109	40	23	17	92.1	133.2
Diarrhea and Enteritis under 2 yrs. of age.....	..	..	..	..	.....	.....
Nephritis.....	130-132	26	15	11	59.9	64.2
Diseases of Early Infancy.....	158-161	30	18	12	34.6*	40.1*
Accident.....	176-195	27	20	7	62.2	30.9

* Rate expressed as number of deaths per 1000 live births.

**Rate expressed as number of stillbirths per 1000 total births.

Provisional Monthly Report of Births and Deaths February, 1940.

	BIRTHS										DEATHS																				
	Total Births	Live Births						Still Births				Total	All Causes																		
		Total	Legit-imate		Illegit-imate		Total	M.	F.	M.	F.		M.	F.	M.	F.	Maternal	Under 1 year of Age	Whooping Cough	Influenza	Pulmonary Tbc.	Other forms of Tbc.	Cancer	Cere. hem. Embolism Thrombosis	Heart Disease	Disease of the Arteries	Pneumonia All Forms	Diarrhea under 2 years	Nephritis	Diseases of Infancy	Accident
			M.	F.	M.	F.																										M.	F.
Nova Scotia	892	867	426	390	28	23	25	13	12	528	287	241	4	88	8	20	30	6	49	27	96	50	40	26	30	27					
Annapolis...	27	27	16	9	1	1	1	1	1	24	10	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Antigonish...	15	14	10	4	1	1	1	1	1	16	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Cape Breton	161	159	83	69	2	5	2	1	1	67	36	31	1	17	3	3	4	1	6	4	8	4	7	6	4	4	4				
Colchester...	41	38	20	17	1	3	2	1	1	39	17	22	3	3	3	3	4	1	3	3	8	8	8	1	1	1	1				
Cumberland	66	64	32	28	2	2	2	1	1	42	28	14	9	9	1	1	1	1	4	2	8	6	6	1	1	1	1				
Digby.....	33	32	18	14	1	1	1	1	1	23	10	13	1	4	1	1	1	1	2	2	7	2	2	2	2	2	2				
Guysboro...	28	27	12	14	1	1	1	1	1	16	11	5	6	6	1	1	1	1	2	2	2	2	2	2	2	2	2				
Halifax.....	200	196	94	87	9	6	4	2	2	100	58	42	13	1	4	2	2	2	11	2	19	11	12	3	3	3	3				
Hants.....	55	54	27	23	3	1	1	1	1	23	11	12	1	4	1	1	1	1	2	1	4	5	1	1	1	1	1				
Inverness...	20	20	9	10	1	1	1	1	1	24	13	11	4	4	2	2	2	2	1	1	3	3	3	3	3	3	3				
Kings.....	46	43	20	21	2	3	2	1	26	14	12	4	4	2	2	2	2	2	1	1	3	3	3	3	3	3	3				
Lunenburg...	43	43	17	21	1	4	3	2	28	15	13	2	4	1	1	1	1	5	1	6	6	5	5	3	3	3	3				
Pictou.....	61	58	30	27	1	3	2	1	45	28	17	2	2	2	2	3	3	3	5	3	10	5	3	3	3	3	3				
Queens.....	21	18	6	11	1	3	1	2	8	4	4	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2				
Richmond...	4	4	2	1	1	1	1	1	5	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Shelburne...	25	25	11	11	3	1	1	1	17	9	8	2	2	2	2	2	2	2	2	2	5	2	2	2	2	2	2				
Victoria...	7	7	3	4	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			
Yarmouth...	39	38	19	16	2	1	1	1	22	11	11	1	3	1	2	2	2	2	1	1	3	1	1	1	1	1	1				

Note: These figures are based on the Birth and Death certificates received by the Division of Vital Statistics, Halifax, N. S., up to and including March 10, 1940 and represent the number registered with the Division Registrars during the month of February, 1940.



C.T. No. 691

Each tablet contains:

Theobromine	- - -	5 grains
*Neurobarb E.B.S.	- - -	1/2 grain
Sodium Bicarbonate	- - -	5 grains

Being antispasmodic and sedative in action, the ingredients of Theobarb *E.B.S.* act synergistically to relieve spasm.

The prompt relief following its administration greatly improves the patient's mental outlook and sense of physical well-being.

INDICATIONS: Angina Pectoris, Arteriosclerosis, Cardiovascular Disease, Nervous Manifestations of the Climacteric Period, Epilepsy, Hyper Tension and as an Antispasmodic and Sedative.

Also supplied with 1/4 grain Neurobarb as C.T. No. 691A Theobarb Mild

Literature and sample on request

*Neurobarb is the *E.B.S.* trade name for Phenobarbital.

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Personal Interest Notes

Dr. Thomas A. Lebbetter of Yarmouth returned recently from Boston where he has been doing post-graduate studies in electrocardiography.

Dr. J. Howard Buntain, Dal. '35, who has practised medicine at Upper Stewiacke for the last four years, has recently moved to Pugwash where he has taken over the practice of Dr. J. A. Langille, who has been called to active service in the medical corps.

Dr. and Mrs. L. R. Meech of North Sydney are on a visit to Montreal.

Dr. and Mrs. W. Phinney of Yarmouth spent the Easter holiday season in Boston.

The BULLETIN extends congratulations to Dr. and Mrs. G. L. Covert of Halifax on the birth of a son on March 14th.

Tuberculin Test Held at Florence, Cape Breton.

A tuberculin patch test survey began in the Florence high school the end of March under the auspices of the Provincial Department of Health and the local health authority. Pupils of grades IX, X and XI were given the test.

Word has been received in Pictou of the safe arrival in England of Dr. and Mrs. Sydney Gilchrist and family from Portuguese East Africa, where Dr. Gilchrist is a medical missionary of the United Church in Canada. Two of their boys are now in school in England. Dr. Gilchrist has received a year's furlough and they are on their way home.

Dr. G. R. Mahaney of Granville Ferry has moved to Bridgetown where he will open a practice.

Dr. Clarence N. Morrison of New Waterford spent three days during the Easter season with his father, Dr. M. D. Morrison, 282 Robie Street, Halifax.

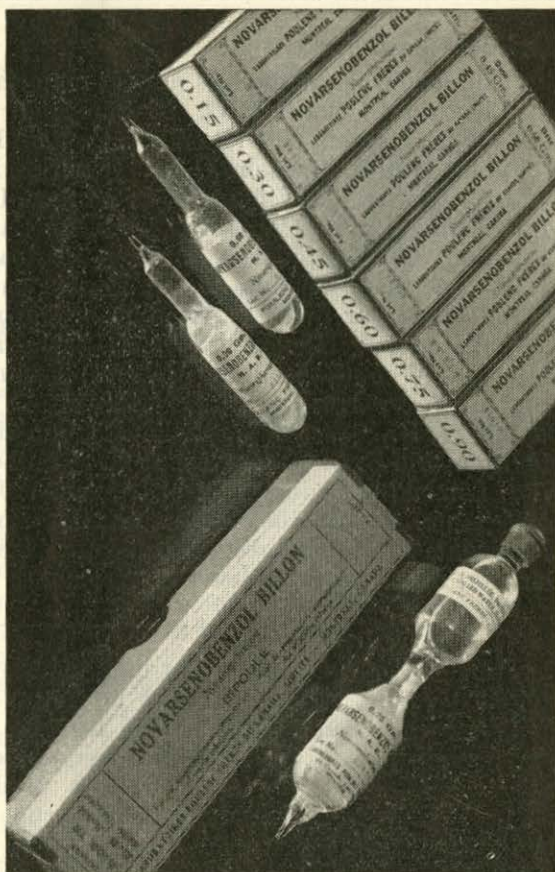
Dalhousie Honours Medical Missionary.

Dr. Jemima MacKenzie of Pictou will be honoured by Dalhousie University on May 14th by receiving the honorary degree of Doctor of Laws. Dr. MacKenzie graduated in medicine from Dalhousie in 1904. In the same year she left for India under the auspices of the Women's American Missionary Society of New York to undertake the medical supervision of a school orphanage of 125 beds. From that time until her recent retirement her work has been a long record of achievement under what must have been, at most times, the severest handicaps. In 1918 the Governor of India presented her with the Kaiser-i-hind Medal for outstanding public service.

Dr. J. G. MacDougall of Halifax has returned from his annual trip to Florida.

25 YEARS CLINICAL BACKGROUND

First used by the allied armies in France in 1914, NOVARSENOENZOL BILLON (N. A. B.) is to-day the choice of leading specialists for the intensive treatment of early syphilis.



The experience of hundreds of millions of injections used all over the inhabited globe, and thousands of published reports, have established NOVARSENOENZOL BILLON to-day as a foremost brand of nearsphenamine beyond comparison with any other form of arsenic for use in the intensive treatment of early syphilis.

Supplied in ampoules of the dry powder in doses of 0.15, 0.30, 0.45, 0.60, 0.75 and 0.90 gram. Bipoules in same dosages.

Laboratory Poulenc Frères

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Medical News.

The following doctors are now in uniform:

Lieutenant-Colonel J. G. D. Campbell, Captain C. M. Jones, Captain J. A. Noble, Captain H. C. S. Elliot, Captain H. Robertson of the Department of Public Health, Captain G. A. Winfield, Lieutenant J. S. Miller, Major T. M. Sieniewicz, Lieutenant W. G. Morson, Lieutenant-Colonel V. O. Mader, Major G. R. Burns, Captain E. F. Ross, Captain C. M. Bethune, Surgeon-Lieutenant C. C. Stoddard, Surgeon-Lieutenant H. S. Morton, Lieutenant R. W. Maclellan, Captain W. D. Rankin and Lieutenant J. F. Hopkirk all of Halifax; Major F. F. P. Malcolm of Dartmouth; Captain B. F. Miller of New Waterford; Lieutenant D. R. Sutherland of Middle Musquodoboit; Major J. W. Sutherland of Amherst; Captain F. E. Walsh of Springhill; Captain H. F. MacKay and Lieutenant G. R. Douglas of New Glasgow; Captain G. R. Forbes of Kentville; Captain H. R. Ross and Lieutenant C. A. MacDonald of Sydney; Lieutenant H. F. Sutherland of Glace Bay; Lieutenant W. J. Lamond of Sydney Mines; Lieutenant J. A. Muir of Port Hawkesbury; Lieutenant J. A. Langille of Pugwash; Captain C. R. Trask of Sheet Harbour; Lieutenant W. H. Embree of Scotsburn; Lieutenant G. P. Tanton of Port Dufferin; and E. A. Fergusson of Weymouth.

A centipede was happy quite
 Until a toad in fun
 Said, "Pray, which leg goes after which?"
 Which worked her up to such a pitch
 She lay dejected in a ditch
 Considering how to run.

What Every Woman Doesn't Know—How to Give Cod Liver Oil

What Every Woman Doesn't Know is that psychology is more important than flavoring in persuading children to take cod liver oil. Some mothers fail to realize, so great is their own distaste for cod liver oil, that most babies will not only take the oil if properly given but will actually enjoy it. Proof of this is seen in orphanages and pediatric hospitals where cod liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

The mother who wrinkles her nose and "makes a face" of disgust as she measures out cod liver oil is almost certain to set the pattern for similar behavior on the part of her baby.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached to it. If the mother herself takes some of the oil, the child is further encouraged.

The dose of cod liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless allowance is made for the oil which clings to the bottle or the bowl.

On account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified With Percomorph Liver Oil may be given in one-third the ordinary cod liver oil dosage, and is particularly desirable in cases of fat intolerance.

CLINICAL APPLICATION OF A NEW CONCEPT OF

Allergy

RECENTLY there has been advanced a conception of Allergy which affords a better understanding of the biologic processes involved in this condition.

According to numerous experimental findings there occurs in allergic subjects, when exposed to a foreign substance (antigen) to which specific sensitivity exists, a series of reactions which culminate in a release of histamine. This liberation may be general or localized. In the normal individual, histamine is neutralized by an enzyme termed "histaminase", but in allergic persons there is evidently a relative deficiency of histaminase.

This new view has led to the production of a histaminase preparation—Torantil—which has afforded relief in many cases of urticaria, allergic dermatitis, and hypersensitivity to insulin, certain drugs, serum and physical agents (cold, heat, light). Some cases of vasomotor rhinitis and asthma have also been benefited. To detoxify an excess of histamine or to meet any deficiency of the normal histamine antagonist (histaminase), it is advisable to prescribe adequate amounts of Torantil to fit individual requirements.

Torantil is a highly active and stable preparation containing histaminase. It is biologically standardized in histamine detoxifying units. Moreover, Torantil has a remarkably high degree of tolerance.

Write for booklet which presents the fascinating story of this new therapeutic agent.

Supplied in tablets, each 5 units. Bottles of 50 tablets.

Torantil

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"T 360"—HISTAMINASE

WINTHROP CHEMICAL COMPANY, INC. NEW YORK, N. Y.
WINDSOR, ONT.

Pharmaceuticals of merit for the physician



OBITUARY

Dr. E. Brinton Hall of Bridgetown passed away suddenly following a heart attack at his home on March 28th, at the early age of 39 years. Dr. Hall was a son of Mrs. Edwin Hall and the late Mr. Hall of Bridgetown. He was a graduate of Bridgetown High School, of Acadia and McGill ('27) Universities and a post-graduate of Harvard. Dr. Hall took clinical work at the Royal Victoria and Montreal General Hospitals, and work at the Montreal Maternity Hospital and on infectious diseases at the Alexandra Hospital, Montreal, and after graduating was house doctor at the Saint John General Hospital. Dr. Hall was a brilliant scholar, a conscientious physician and surgeon and a gifted musician. He is survived by his wife, who was formerly Dr. Hazel Thompson of Halifax, a small son, Tommy, his mother who is at present in Vancouver, and a brother Hedley Hall of Bridgetown.

The death occurred at Yarmouth on March 29th of Dr. Alexander Rae Campbell at the age of 51, following several months illness. Dr. Campbell was born in Noel, Hants County, a son of Mr. and Mrs. Alexander Campbell of MacLellan's Brook, Pictou County. He graduated from Dalhousie Medical School in 1913 and went to Yarmouth where he took over the practice of the late Dr. Phinney. Shortly after the war broke out he enlisted with the Dalhousie Medical Corps and spent the four years in England and France, and during that time was awarded the Military Cross for distinguished service. After the Armistice he continued his studies at London and Edinburgh where he was awarded his M.R.C.S., L.R.C.P. and F.R.C.S. He post-graduated in Vienna and returned to Yarmouth where he resumed his surgical practice. He was a charter member of the Canadian F.R.C.S. Dr. Campbell is survived by two brothers, the Rev. L. B. Campbell of Sydney and J. Arthur Campbell of Yarmouth and two sons.

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How much of a threat is the Menopause?

FROM TIME IMMEMORIAL, women have looked upon the years of the menopause as the most dreaded years of their lives.

They have regarded "change of life" as a serious threat to their health, their charm, and their peace of mind. They have visioned it as a dark and mysterious state; a time of acute physical and mental distress, and the gateway to sudden old age.

Is the menopause actually the nightmare it is so often pictured?

It need not be. Under the sympathetic and expert care of today's physician, change of life is robbed of most of its terrors. For the doctor of today has important and practical things to do about the menopause that were utterly unknown to his predecessors.

To the women entering the menopause, the modern physician can bring alleviation of physical discomfort and nervous distress. He is equipped to combat most of the complications of this period of change. He can dispel the fog of fears which superstition and legend have so persistently created.

And he can do another thing. The doctor's knowledge enables him to decide whether the patient's condition is due wholly to menopause, or whether

there are manifestation of some entirely different trouble. Left to herself, there is a natural tendency for the woman to blame all her physical ills on change of life. The doctor can quickly identify symptoms—and if there are any that indicate the presence of some other difficulty, he can take corrective steps at once.

With the doctor in the picture, the woman going through this period of glandular readjustment can set her mind at ease. With her physical distress largely banished, she can keep on enjoying life as usual. In fact, the chances are that she need not even disturb her daily routine.

And when the menopause is over, there is every reason to believe she will find herself with her charm undimmed and her health unimpaired. She can then look forward serenely to years as happy as any in her life.

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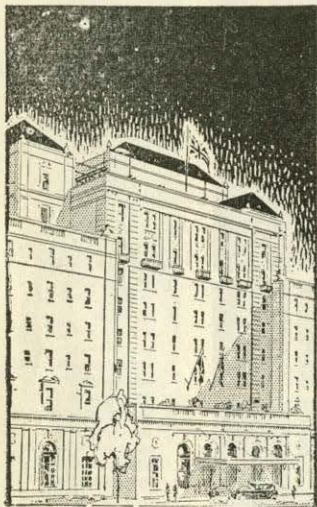
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A Canadian National Welcome Awaits You

at

The **NOVA SCOTIAN**
HALIFAX, N.S.



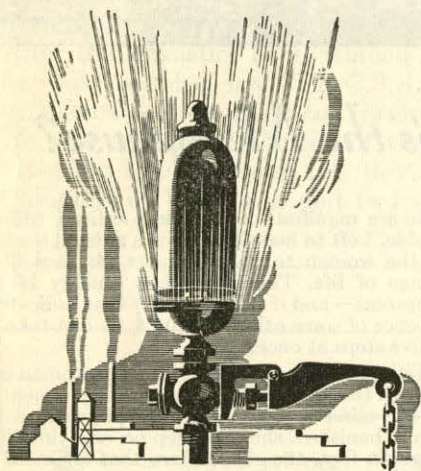
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The Royal Bank of Canada



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"Servamus Fidem"

How Much Sun Does the Infant Really Get ?

Not very much: (1) When the baby is bundled to protect against weather or (2) when shaded to protect against glare or (3) when the sun does not shine for days at a time. Mead's Oleum Percomorphum offers protection against rickets 365¼ days in the year, in measurable potency and in controllable dosage. *Use the sun, too.*

MEAD JOHNSON & CO. OF CANADA, Ltd., BELLEVILLE, ONT.

A new "Ciba" product which exhibits, according to the dose, a sedative-antispasmodic effect of a central and peripheral nature, or acts as a mild soporific—

Neuro-Trasentin

"CIBA"

(Trasentin + phenylethylbarbituric acid)

FOR THE TREATMENT OF NEURO-VEGETATIVE DISTURBANCES

Neuro-Trasentin should undoubtedly be of great value in the following conditions:—

Excitability, states of agitation,
Cardiac neurosis, angina pectoris,
Vascular spasms, hypertonia, nervous dyspepsia,
ulcer pains,
Climacteric disturbances, dysmenorrhoea,
Pruritus, hyperthyreosis, etc.

ISSUED:

Tablets, in bottles of 30 and 100; also in bottles of 500 for hospital use.

DOSAGE:

As a sedative and antispasmodic: 1 tablet 3 to 6 times during the day.

As a hypnotic: 2 to 3 tablets half an hour before retiring.

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Unexcelled Shadow Forming, Perfect Suspension. No hardening and retention of excreta. Satisfactory for oral and rectal use.



Gives Best Results—Least inconvenience to physician and patient when Mallinckrodt Barium Sulphate is used because it is made by the precipitation process, the only method that gives a uniform fine powder remaining satisfactorily in suspension.

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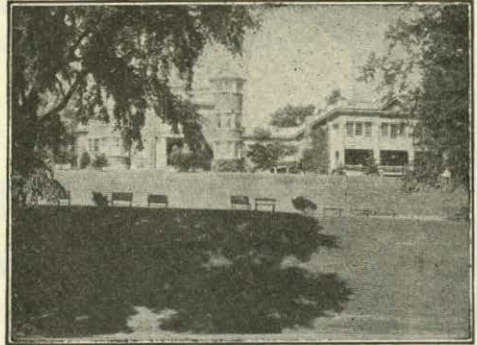


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