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DR. H. L. SCAMMELL, Halifax, N. S. DR. C. M. BETHUNE, Halifax, N. S.

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John George MacDougall

On the evening of April 23rd, at the Nova Scotian Hotel, the Halifax Medical Society held a complimentary dinner in honour of Dr. J. G. McDougall, on the occasion of his Golden Jubilee in medical practice. At this pleasant and happy function the toast to the guest of honour was proposed by Dr. H. L. Scammell, and seconded by Dr. K. A. MacKenzie. The president of the Society, Dr. John C. Acker, presented Dr. MacDougall with an illuminated address, and an appreciation was delivered by Dr. C. S. Morton. The BULLETIN wishes to do honour to Dr. MacDougall, as indeed well it may, since in the past he has graced its pages on many occasions. We are proud to reprint here the full text of the illuminated address and of Dr. Morton's appreciation and feel sure that the ideas and sentiments expressed in these tributes will find an echo in many hearts.

* * * * *

JOHN GEORGE MACDOUGALL

M.D., C.M. (McGill), F.A.C.S., F.R.C.S. (Can.)

1897-1947

"We the Officers and Members of The Halifax Medical Society of Halifax, Nova Scotia, in meeting assembled, learning that this year, One Thousand Nine Hundred and Forty Seven, marks the Fiftieth Anniversary of your graduation as a Physician, do hereby with one accord and of one mind tender you our Congratulations and Sincerest Felicitations on this momentous occasion.

We are reminded that from the earliest days of your professional career you have steadfastly sought the promotion of the highest ideas of our Art. By constant Study, seizing upon every Advance that was good, and discarding all that was false or insecure, you brought to bear upon the practice of that Art a mind filled with understanding, which yielded rich results in your care of the Sick and Afflicted. Moreover we remember that at all times you were zealous in curing the Sick Mind as well as the Sick Body, associating with your skill all the innate forces of the patient.

Nor have you neglected the welfare of your Confreres in the ardent pursuit of your calling. For nearly fifty years as a Member of the Provincial Medical Board, and for the past Quarter of a Century as its President, you have sought to maintain the highest ideals of Ethics and the soundest standards of Education in our ranks in this Province. To the latter end as a teacher in the Department of Surgery at Dalhousie University for over Thirty Years you have made a contribution which can never be sufficiently estimated.

Any opportunity to bring order out of chaos in the field of Medical Licensure in Canada won your enthusiastic support and is today exemplified in The Medical Council of Canada of which you have been a Member for many years and have served a term as its President.

From an early period in its history you were a Fellow of The American College of Surgeons, assisting in its tremendous tasks of elevating the standards of Surgery and improving the services of our hospitals on this Continent. Your wise counsel and sound judgment have been called upon times without number in framing its policies and resolving its difficulties.

At a later period in your life you give the same measure of support to the Royal College of Surgeons of Canada, of which you also hold the Fellowship and to Dalhousie University, of which you are a Governor.

The desire to assist in the Upbuilding of our Province has led you to engage in a wide variety of effort in the Mercantile and Educational fields which have won for you appreciative recognition far beyond its borders.

We, your friends and associates of many years, would also record our sincerest appreciation of your personal help in the many problems which confronted us in the course of our work. In particular those of us who were associated with you on the Surgical Service of The Victoria General Hospital and at the Halifax Infirmary, had the benefit of your technical skill, diagnostic acumen, and sympathetic assistance, fully and freely.

With One Accord we Honour You on this Fiftieth Anniversary and Pray that you may live long to enjoy the Fruits of your Labours and the Sincere Appreciation of a Host of Friends.

On Behalf of the Society,

* * * * *

Our Honoured Guest, Dr. MacDougall

Mr. Chairman and Colleagues:

It was with considerable diffidence I consented to accept the honour of making an address on such an auspicious occasion as this. But the honour conferred and the opportunity to express some slight appreciation of the life work of our distinguished guest, Dr. MacDougall, on the jubilee of graduation in medicine were too great to decline.

In setting down my recollections of him I desire to confine my remarks to what I have personally known and seen. To attempt to do justice to his career and character in the time allotted would be like unto planting an acorn at night and expecting to find a full grown oak in the morning.

I pause to consider how best I can render in mere words, even a faint impression of one of the most inspiring and interesting of all my many friends and acquaintances. To many of us there is but one John George MacDougall, who stands unique in the medical profession of this province and Dominion.

It is just fifty-three years since I first met him. It was in the autumn of 1894 at an "At Home" given to Maritime Students at McGill by the late Sir William Dawson, then principal of that University and a Maritimer himself—a native of Pictou County—of which county one hears occasionally. It was a Sunday afternoon and the occasion Sir William took to welcome and become acquainted with the students from the Maritimes.

Dr. MacDougall was then a sophomore and I a freshman of the freshest kind. None the less we became well acquainted and this friendship has continued and ripened with the years, so that to-day I count him one of my oldest and best friends. That first impression of ineffable mental charm was then formed and has never lessened or become modified.

As an undergraduate I need but mention the many successes he had on the campus and in the class room. As a hammer thrower and shot putter he held the University records until broken many years after by his nephew.

In those days even more than to-day, in the academic sphere it was

Ontario vs. the Maritimes, and the goal the "Holmes gold medal" for the highest aggregate of marks for the whole medical course. C. B. Keenan was slated to carry off all the academic honours but he had a worthy and doughty opponent in John MacDougall and after keen competition over the four years for supremacy the final award came to John G. MacDougall and he became The Holmes medallist for 1897.

As an interne in medicine at the R. V. H. he did good work, but his heart was with Surgery and on every opportunity he visited the surgical wards and operating room and received from that remarkable man, James Ross, many of the "little tricks" he later used in his "Amherst days."

From McGill he came to Amherst in 1898 and from then the ramifications of his numerous activities and his versatility in so many walks of life are perhaps unknown to many here. His "Amherst days" were fraught with much toil and endeavour but his attention to his professional duties did not dampen his interest in civic affairs and his was the driving force which culminated in the erection of the Highland View Hospital and the Amherst Academy.

Also during all his professional life he has taken time off as a disciple of Isaak Walton and many an excellent dinner of wild duck and goose, or moose, has been the result of his prowess as a hunter.

Despite the tendency of fifty years ago of sending all doubtful and serious surgical cases away, he developed his diagnostic and surgical technique to such a degree as to perform operations such as never before had been attempted in Nova Scotia. He did pioneer work in gall bladder and thyroid surgery and on many abdominal cases which heretofore had been sent out of the province or left to die. So from a reputation as an excellent general practitioner he soon became recognized as the leading surgeon in the County of Cumberland. I could cite many successful cases done under most unfavourable conditions, which to-day we would consider as only inviting more trouble. But his surgical career is a story all its own.

It was inevitable that Amherst could not hold him. It was either Montreal or Halifax and we of this city have much for which to be thankful that he chose as he did.

Since his arrival here, I need not outline his surgical activities. These are well known to all of us. As a member of the Surgical Staff of the V. G. H. he has rendered skilled service to many. He was always willing and ready to aid in any good work and his fellow practitioners could depend on his immediate and certain support regardless of time, distance or remuneration.

As a teacher he has exercised a very definite and far-reaching influence in surgery in this and beyond this province. Though not a direct associate of Osler, he came from an institution where the Osler mark was paramount. To his students he appealed to them as one *who was possessed of an intimate knowledge of his subject, by his thoroughness in investigation and a memory power to an unusual degree.* He insisted on bedside study of the patient—the necessity of using his powers of observation along with his mental equipment and making an exhaustive examination and survey of the case with all clinical findings are resorting to such valuable aids as the laboratory and X-ray—helpful and necessary in themselves but not meant to supplant but supplement careful and thorough physical examination.

As an examiner he has always been most just to both the candidate and the public.

Very few members of the profession in this province realize the amount of work and tact shewn, necessary to keep all in good working order in the Provincial Medical Board. It is only behind the scenes one gets to know what really transpires. The many requests for registration have to be probed and the reasons behind the application found. All too often refusals have to be given because of ulterior motives and back-door methods. Whilst these do not become known to the medical profession generally, it is a most useful and difficult work, (to which Dr. Scammell can vouch), and this work has been done in a most enviable and efficient manner, and under the direct supervision of Dr. MacDougall who has been a member of the board for over 45 years and its President since 1922. Through these years he has done a really good job for the protection of our profession and the public in this province—as well as the General Medical Council of Great Britain and those with whom it has reciprocity.

During his professional life he has been the recipient of many honours by the profession. He has served—as President of this Society—of the Nova Scotia Branch of the Canadian Medical Association of the Canadian Medical Protective Association—the Medical Council of Canada and on the executive of the Canadian Medical Association and on the General Council of the Royal College of Physicians and Surgeons of Canada. When as one of the Vice-Presidents of the American College of Surgeons he accompanied them on their South American tour, he found himself the senior ranking officer and as such was called upon to represent the college and preside at all social and professional functions—which he did with grace and dignity.

For some years I had the pleasure of sitting with him in the Medical Council of Canada at Ottawa and what interested and impressed me to a considerable degree was the understanding and cordiality shewn to this province by the Council members from Quebec. Engaging in conversation with one of them, I was informed that from the inception of the Council the Quebec members had received from the Nova Scotia members, and especially from Dr. MacDougall, their unqualified support in many instances where they felt inroads and demands were being made which were inimical to the interests of Quebec.

It was and remains an "entente cordiale" which should be maintained and fostered and could well be followed by all Canadians who by thought and endeavour are desirous of seeing this Canada of ours a united people. "J. G. MacDougall" is a name with which to conjure amongst our Canadian colleagues of French descent.

In the year 1909 a delegation from the Carnegie Foundation visited Halifax to report on the Halifax Medical College. The report to use very mild language was "distinctly unfair and misleading"—so much so, that at the Nova Scotia Medical Society in Yarmouth in 1910 the Report was discussed and as one surgeon put it "nothing but prejudice or gross ignorance" could account for it. None the less the Report with its damning influence remained in spite of repeated attempts to have it retracted. So it went on until about the year 1920—when the sands were running low as to the fate of the Faculty and it appeared as though it would have to fold up or continue as a second grade school. All endeavours for retraction and financial aid, by

"the powers that be," had unequivocally failed. But Dr. MacDougall went to the Carnegie Foundation people and his eloquent and persuasive pleading of the cause was heeded and they retracted and the necessary financial aid was forthcoming to enable the Dalhousie Medical Faculty to carry on to an even greater degree of usefulness than heretofore. Dr. MacDougall never received nor did he wish any recognition of this signal accomplishment—but I would be negligent of my duty towards him and you, not to mention it even at this late date. By this one achievement he has more than justified his existence, which not only redounds to his credit but to the benefit of hundreds of young men and women who have had the advantage of getting their training and graduating in medicine from this University.

But the Medical world has not monopolized all his activities—though we wish he had taken time to write more—and this no doubt he would have done had not his financial interests occupied so much of his spare time—we are all aware that he is the main spring of the Maritime Life Insurance Co., and a very decided and active addition to the directorates of the Halifax Fire Insurance Co., and the Bank of Nova Scotia—any one of which most medical men would consider enough honour and token of confidence in the financial sphere.

As to science—it is said that art and science do not mix in the human mind—but in the mind of Dr. MacDougall they are complementary. He is steeped in the Humanities—enjoying to an unusual degree a knowledge of the Ancient and Modern classics—both in prose and poetry. He is also a connoisseur of *The Fine Arts* and if one considers medicine an art—which no doubt it is—he can claim to be an artist of no mean ability.

But should we take a few days off and travel with him through this country by car. One is astonished at his knowledge of Geology. From the Laurentians in Quebec to the remote tips of Nova Scotia he has a most intimate acquaintance of our physical make-up.

To travel the roads with him (and his little hammer) and explore the shores and mountainsides is a real treat. He can explain, in simple language, why no grass grows here and why no trees grow there—why the luxuriant foliage, and why the mountain or the plain—the hummock—the valley or the lake. It is a lesson in itself to be taken back to the Cenozoic Age or the Pliocene or Triassic Period, or any other age or period you may wish. Nova Scotia scenery and terrain put on a different aspect when one has such a companion and one's mind harks back to the wondrous scenes which must have occurred many eons ago to make this Nova Scotia landscape so picturesque and enchanting.

So we see the Artist and the Scientist blend in such a man as we honour tonight and in honouring him we honour ourselves.

No doubt he has his frailties—and who of us has not? I need but mention a few. To his friends and many of his associates he is known to be an addict—i.e., of tea, coffee, tobacco and matches. Once he so far forgot himself as to enter the political field. That was in 1925—when no one of his political stripe had a chance—and the only period in his generation that such obtained—one felt sure he could not possibly be elected so I cast my vote for him—even though he might even now doubt that.

Only once have I, in our long acquaintance, seen him non-plussed and puzzled. Some years ago Dr. MacDougall, my brother and I were in the

Laurentians en route to Montreal by car. We stopped at a summer resort "Pinehurst" for a cup of tea. He enjoyed as usual his cup and when a cultured and charming lady came to our table and asked us if we wished our cups read—and *no charge*—we agreed, but Dr. MacDougall's was the only cup empty so she took it up and gave a most accurate and precise account of his life. She didn't miss a trick and he certainly was astonished. "Most remarkable" was his only comment. I never told him till some years after that the affair was planned and I had slipped away and given her the main details and she filled in the rest. She did it to the King's taste—no wonder he was amazed.

In summing up, well and truthfully can he say:

I have loved no darkness,
Sophisticated no truth,
Nursed no delusions,
Allowed no fears.

and in closing I cannot do better than quote an excerpt from a dedication to the medical profession by Robert Louis Stevenson:

There are men and classes of men—that stand above the common herd: the soldier, the sailor, and the shepherd not unfrequently; the artist and statesman rarely; and more rarely still the clergyman—the physician almost as a rule. He is the flower (such as it is) of our civilization, and when that stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art—never to those who drive a trade. Discretion tested by a hundred secrets. Tact tried by a thousand embarrassments and what are more important Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick room and often enough—though not so often as he wishes—brings healing.

Such a man is Dr. MacDougall and one may well exclaim "*Ecce Homo*"—as we shall not look upon his like again.

Dr. MacDougall—we can only wish you a long and happy continuance of good health to carry on the manifold duties which you have undertaken and in which you have so eminently succeeded—and added lustre to our profession.

CHARLES S. MORTON,
Halifax, N. S.

Medical Adventures in Korea

FLORENCE J. MURRAY, M.D., C.M.

Running a Hospital Never Monotonous

"DOCTOR!" said a quiet voice in my ear, "Chai Tukie's mother is hiding under his bed and his father has been there a long time. I'm afraid he'll find her and then there'll be big trouble. Please come and send him away."

"Why don't you send him away yourself?"

"I'm afraid. He's crazy. He beats her up every time he sees her and that's why she has to come at night."

It took twenty minutes to persuade the man to leave. When he had gone at two in the morning his wife crept out of hiding and slipped away in the opposite direction, leaving their son, a lad of seven with a cast on a tuberculous leg, to shed a few tears for his unhappy home before dropping off to sleep.

Where could the night orderly be? He should have got rid of the visitor long before. Not in the utility room, not at the nurses' station, ha! the rascal, sound asleep in one of the beds in the men's general ward. I shook him none too gently and told him once more what his duties were. All the patients were asleep, he said, and he didn't see why he should not have a little rest too. A little talk on responsibility seemed in order, and wasn't wasted either for he eventually became a capable and reliable male nurse.

Another night the gentle voice of Kang Doka the matron woke me. The patients were being alarmed by a drunk who had come upstairs to the women's floor where he was struggling with the night orderly who could not put him out. Three times I succeeded in getting him outside the door and three times, remembering the disrespectful orderly, the drunk went back to fight him. It was no use telephoning the police who would not answer such calls. Finally the orderly had the wit to get out of sight and I started the alcoholic on his way.

More trouble than the drunks were the insane who sometimes wandered into the hospital terrifying the patients. There being no place to which mentally ill patients could be sent for treatment, they were allowed to go about begging often wearing handcuffs which they shook menacingly at any one who annoyed them. Violent patients were usually tied up at home. One of these mentally ill patients who gave us a good deal of trouble had been a medical student engaged to one of our nurses. He stole from the patients, threatened the staff, and, looking for his girl, one night got into the nurses' home brandishing a big stick. The nurses fled in their night attire and when the night orderly went to the rescue he was forced to kowtow to the man with the stick. He seated himself on one of the dining tables and pounded with his club until he broke the table. This man who paid little attention to any one else never refused to obey me. Consequently, when he had stolen from the wards, it fell to me to make him disgorge his loot, a task that sometimes took considerable time and effort.

Outsiders were not the only ones who gave occasion for this sort of police duty in the night. Once when the pharmacist had lost some money, she proved to her own satisfaction by casting lots that the cook was the thief. After

beating the old woman and tearing the clothes half off her, she began to drag her to the police station. At this stage the matron disturbed my slumbers to tell me and I set off in pursuit for it was the night of Christmas eve and it would not do to have one of the employees of the mission hospital locked up in the police station on Christmas day, all the more so because under the Japanese system of justice accused persons are considered guilty until they prove themselves innocent and are generally beaten to prompt them to confess. They returned.

Later when the pharmacist had been dismissed for this and other faults, her brother after sending several threatening letters arrived himself at my bedroom door at ten o'clock one night to force me to take back his sister. He was in such an unpleasant mood that I thought it wiser not to open the door. Telling him I was retiring for the night but would see him the next day in my office at any time that suited his convenience, I finally got rid of him. Next day, with several witnesses to the interview to give an unbiassed account later, we settled the affair without anything worse than shouting on his part and without backing down on ours.

Ordinary visitors were sometimes problems too.

Accompanying the sick member of the family, they settled down bag and baggage in the ward, sitting on any unoccupied beds and spreading their own bedding on the floor between. Attempts to get them to leave were generally ineffectual. They had come a long distance at considerable inconvenience and expense to take care of the patient, nurses and nursing care being unheard of, and when encountered not to be trusted. These visitors kept the wards in a constant state of disorder, turned on the taps and left them running, blocked up the plumbing by throwing in anything to be disposed of, slept in the bed with the sick person, emptied the bed pan at the front door, and threw blood and pus stained dressings out the window. When remonstrated with, they insisted they were ashamed to have the hospital staff doing so much for them and were just trying to help.

In the children's ward it was not unusual to find that the father had brought the other children to spend the night with their mother and the sick child in the hospital. There they would be, three or four together in the cot and the mother on the floor, or the mother in the cot and the children on the floor, and the father gone. Nothing could be done about it. They could not be sent home alone and the mother would not leave the sick child to go with them. If we made too much fuss about it, the mother would take the patient and they would all go, thus preventing us from doing anything not only for that particular child but probably for the whole family and likely enough the whole village, for who would go to a hospital where the people were heartless enough to send a sick child away in the night? Kindness, sympathy, patience, are as necessary in a mission hospital as medical skill.

Diet and Baths

If a Korean can't eat a full meal he is far gone indeed. Diabetics and nephritics did not see why they should not eat what they wanted, and if the hospital did not provide it, they either ordered it from a restaurant or their friends brought it. We lost one little lad on the operating table because his father, in spite of having been warned not to give the child anything to

eat, fed him a large bowl of rice. Being assured that the boy had had nothing, we gave him ether and removed the appendix. As the patient was about to be placed on the carriage to return to the ward, he suddenly vomited large quantities of thick glutinous vomitus some of which was aspirated into the lungs and he was dead in a few moments in spite of all that could be done.

Dried salt fish and hard cakes were favorite foods to bring to sick people, even babies still breast fed often being seen clutching these delicacies or gnawing at them with relish.

One young man who was slowly recovering after a severe attack of acute nephritis left the hospital so he could eat all he wanted of what he liked. He and the family had been warned that it would not be safe to discontinue treatment. The family being well to do called in every doctor in the district one after the other. Each was asked to prescribe and the youth was given simultaneously all the medicines prescribed by each. They made a feast for him of all the foods that he specially liked and he enjoyed himself thoroughly. Three days later they brought him to the hospital in coma and he died in an hour.

The application of water to the skin during illness being regarded as highly dangerous, patients with chronic disease were sometimes far from clean. Some of them and their friends objected to baths but that was one point on which we did not compromise. Most hospitals made no effort to educate the public in this regard. A professor of medicine in one of the medical schools had a standing order that none of his patients were to be bathed. A boy with osteomyelitis and many discharging sinuses was brought to us from the government hospital where he had been under treatment for fifteen months without a single bath. Cleaning up such a patient is no small task. I once reproved a nurse for taking so long giving a patient a bath. "I've used seventeen basins of water and he's not clean yet," was the reply.

After being bathed and clothed in clean hospital garments, the patient was often found to have put on his own clothes again, no matter how filthy, over the clean ones. Most Koreans are too poor to own separate night attire. Going to bed consists of the simple process of lying down in one's clothing on the floor and pulling a quilt over oneself. They were afraid of getting cold after the unaccustomed bath and on top of that being put into a cold bed instead of on a hot floor.

Relations With Police

Health and sanitation in Korea under the Japanese were in the charge of the police. Once a year when they inspected our drug room they generally smashed a few bottles on the floor just to be impressive. Once three of them, including the police chief himself, arriving unannounced at the hospital demanded that I personally show them around at once. As I happened to be scrubbing for an operation and the anaesthetic was already being administered to the patient, I sent them a polite message telling them this and saying that I was sorry and would have one of the other doctors show them around. No excuses would be accepted, they said. I must appear before them instantly. Down I went, cap, mask, and rubber apron on, scrubbing brush in hand and soap suds flying. Seeing that I had told the truth and not been showing them disrespect as they had thought, they were profuse in their apologies and went away without inspecting anything. Had I waited to change my clothing they

would have been confirmed in their impression that I was uncooperative and might have made it very unpleasant for me and difficult for the hospital.

One Sunday morning a dead man was found lying inside the entrance to the hospital grounds. This being reported to the police they ordered us to leave the body as it was until they got there. Hours went by. We could do nothing. Crowds of people going to and from church gazed upon the body at the hospital gate looking as though they thought when we had completed our experiments on our patients we disposed of them by throwing them out. In a little matter like that the police take their time.

Post mortem examinations were almost always refused by the relatives. In the rare cases that they agreed, the police whose permission had also to be received, refused theirs. In this case where no relatives were to be found we had some hopes of getting permission to make the examination but the police said we were shameless creatures to wish to do such a thing to a poor friendless beggar and they couldn't permit it but since the body had been found on our property we would have to bury the man.

Patients admitted with infectious diseases to the isolation ward had to be reported on admission and again on discharge to the police and were supposed to be in our custody. The government pest house provided neither medical nor nursing care and it was popularly believed that no one ever came out of it alive. That being the case, it was not surprising that any isolation ward was regarded with suspicion. Patients were lonely and their friends would slip in at night to visit, or the mother accompanying her sick child would take the diphtheria patient on her back and go visiting in the ward where some patient with another disease was. If a patient wished to go home, his friends might quietly carry him off, or he would run away while the nurse was busy in another room. When this was reported to the police we got in trouble.

Tuberculosis

The isolation ward was one big problem until we evaded that particular difficulty by changing to a tuberculosis ward.

No one ever having heard of a recovery from tuberculosis, that diagnosis was the equivalent of a death sentence. No doctor attempted to treat it. There was not a sanatorium in the country. Patients sometimes committed suicide when they heard they had tuberculosis.

Among the first patients in the newly established tuberculosis ward was a youth, the only son of a widowed mother who happened to be a particularly crude and unintelligent woman. The average Korean patient demands to know how many days it will take to cure him and expects to be given large amounts of potent drugs by the bowlful or preferably shot into his veins with a large and impressive looking syringe. No one had ever heard of the value of rest which had to be explained at length and the necessity of obeying the rules and following out the hospital routine was gone into in detail and agreed to by patient and mother.

The boy was admitted and all went well until rest hour when the mother refused to leave her son's bedside. When requested to co-operate in keeping the rules, she became angry and disturbed all the patients by her shouting and loud complaints. Finally the orderly and I, taking her by the arms, walked her out the door and locked it behind her.

She screamed, shouted, and swore, hurling vituperations at the hospital and all connected with it. Tirelessly she kept it up throughout the whole of the rest period and that night at bedtime the performance was repeated. No one was able to make her desist and no one had any sleep that night in either the general hospital or the tuberculosis ward. At five in the morning my telephone rang. She had dislocated her jaw.

"Thank the Lord," said I fervently, and took my time to allow her a period of reflection on her conduct and its consequences. Though inarticulate, she was still screaming, and I hardened my heart and made a bargain with her. At such a disadvantage, she was forced to agree and promised to give no further trouble if only I would put her together again properly. She kept to her bargain for two days and then, finding it too difficult, took her son home.

Patients wished to be cured in a few days with large doses of medicine and if not given this were apt to be dissatisfied. Some took their own treatment along with what was ordered in the hospital. Once when a newspaper article mentioned that some one who had taken kerosene oil had recovered from tuberculosis, several of our patients drank considerable amounts of the oil and made themselves so sick they had to admit what they had done.

One man insisted on being told what food was good for tuberculosis. Upon his repeated urgings, in a moment of weakness I told him that although there was no food that would cure his disease eggs would be a nourishing addition to the usual diet. A few days later he complained that although he had since eaten twenty-eight eggs a day he still felt no better.

Another patient, hearing that if she ate ten cats she would be cured, was unfortunately able to secure only nine. Later, learning that three owls were a sure cure, she ate two but every effort to secure a third failed. This woman was not a hospital patient.

Lack of confidence that kept people going from one doctor to another made it impossible for any of them to do much in some cases. Such a history as the following is not uncommon. A burly policeman who developed a sharp pain in his chest went to see a Korean doctor just returned from abroad where he had taken post graduate work in tuberculosis. This doctor made a diagnosis of pleurisy and told the patient to stay in bed. This he did for a time but his friends kept telling him he would lose strength thus and advised him to rise early, climb the mountain, and there swing his arms and shout loudly to exercise his chest. This he did and soon became worse.

Since the first doctor had not cured him, he went to another, who found fluid and aspirated it. It formed again so, as the second doctor was not curing him either, he went to a third. The fluid becoming purulent, he changed his doctor once more.

The fourth doctor drained the chest by inserting a piece of rubber tube between the ribs. Likely enough the doctor advised more adequate drainage and was refused permission to remove a portion of rib. Drainage having been established, the patient undertook to treat himself by using a bunch of the fine fibrous roots of a tree inserted in the wound like a wick. When they became lost inside he changed his doctor again and came to our hospital with the demand that the roots be removed. A section of rib was resected, the roots, a dozen or more in number and about twelve inches long, were recovered, and a proper drainage tube inserted. The lung was completely collapsed, the

discharge copious and foul. All doctors now having been proved useless, he returned to his home and died soon after.

The majority of tuberculous patients admitted to hospital were intelligent and cooperative and the results were reasonably good. Our pneumothorax apparatus was home made but it worked. At first we had only a portable X-ray outfit and it was a great day when we acquired a full size machine with a fluoroscope.

When the first tuberculous patients with disease arrested returned to their homes, their friends could scarcely believe their eyes. "I thought you were dead," was a common greeting, "I heard you had tuberculosis and I thought you must be dead." Within a few years the attitude of the people of the province in regard to tuberculosis was changed from one of despair to one of hope.

Parasites

Infestation with parasites is with most Korean patients, if not the normal, at least the usual condition. Ninety-five per cent have ascaris and about seventy-five per cent of patients have two or more different types of infestation, hook worm, tape worm, whip worm, and pin worm being the commonest varieties.

The game of hide and seek that may be played with these companions of mankind sometimes border on the adventurous. Not infrequently one sees a restless specimen of ascaris wriggle out of an abdominal wound after a laparotomy and still more often cuts through the body of one as it attempts to escape through the distal extremity of an appendix that is being severed. I once encountered one in the Fallopian tube, and to see several specimens wriggle from the noses of their hosts or being vomited by patients regaining consciousness after ether anaesthesia was no uncommon experience. Once during the course of a laparotomy a fine specimen was encountered apparently bent on an exploring expedition around the peritoneal cavity.

A six year old child who had under treatment expelled more than five hundred round worms finally came to autopsy. There were worms in the gastrointestinal tract all the way from the stomach to the sigmoid. Three perforations in the colon communicated with walled off abscesses in the peritoneal cavity, each containing several more specimens. Thirteen round worms were impacted in the hepatic duct, while numerous others were embedded in the liver substance.

A patient suspected of harboring hookworms was advised to bring a specimen of stool for microscopic examination. A week later the woman, a large vessel on her head, inquired for the superintendent. Thinking she had brought a gift of food the matron with anticipatory smiles conducted her in. Placing the dish before me the woman asked anxiously "Will this be enough?" and displayed the specimen accumulated for a week.

While an obstructed intestine was being drained, a loop of tape worm presented itself and was pulled out, thirty feet of it. This was before the days of Wangensteen or Miller-Abbott tubes and generally the tube in the jejunum was itself obstructed with a mass of round worms within half an hour.

During the closing of an abdominal incision a small whitish mass in the adipose tissue under the skin was removed. About three inches long, it looked something like a tape worm but was striated rather than segmented, and the

head was not easily distinguished. Its movements were quite active. A similiar specimen was removed from a small subcutaneous soft mass that had rather suddenly appeared on the back of a patient. There was no pain or discomfort and the mass disappeared as soon as the parasite was removed. The third such that I encountered made an even more dramatic appearance being extracted from beneath the conjunctiva. The life history of the *Sparganum* is unknown although many cases have been reported in the Orient.

Congenital Defects

A girl eighteen years of age gave a history of having had a slight leakage of urine ever since infancy. The bladder functioned normally with perfect control but her clothing was constantly damp. Several doctors whom she had consulted could find no cause for the condition. Finally a member of her family with no medical training whatever, using two bent spoons as specula, made a vaginal examination and saw a small opening on the anterior wall from which urine trickled. This I was able to confirm. There was no irritation of mucous membrane or skin. The patient refused further investigation.

On looking up the literature when I had access to a medical library, I found that up to that time there had been only twenty-two cases of aberrant ureter opening into the vagina reported.

A six year old boy with local gigantism of the right leg was brought because the limb was so heavy and so much longer than the normal leg that walking was impossible. The great toe which was about half the size of the normal foot projected laterally and somewhat backward from the middle of the inner border of the foot. The other four toes were rudimentary, the fifth being on the lateral border of the foot opposite the great toe. It is unfortunate that we did not have an x-ray apparatus at the time. Disarticulation of the foot through the tarsus and the wearing on the opposite foot of a special shoe with raised sole and heel enabled the child to walk. Since it is believed that an amputated part must be buried in the same grave with the rest of the body lest the person be a cripple in the next world also, the foot was taken away and we were not able to examine it by dissection. It would have been interesting to know the end result but we were not able to keep in touch with the family.

An attractive looking girl when viewed from one side was found to have on the other side of her face, extending from scalp to neck and from the mid-line to the ear, black rough skin presenting a corrugated appearance like that of a dog's nose. To make matters worse this was covered with coarse black hair as long and thick as a rat's fur with here and there long stiff hairs. The skin seemed thicker than usual but there was no puffiness as is often seen over an extensive naevus, and no sign of abnormal blood vessels. Apart from this horrible blemish the girl was perfectly normal and seemed to have achieved an excellent adjustment to a severe handicap.

A Remarkable Tumor

A man of about thirty-five years of age presented himself with a sloughing bleeding tumor six inches in diameter with hard rolled margins raised an inch above the surface of the scalp. The patient was pale and weak from pain, loss of blood, and sepsis, while the odor was almost unendurable.

On removing the mass much of it was found to be soft friable tissue that could be easily curetted away. The periosteum had been destroyed leaving

the outer table of the skull bare. Several holes had been eroded completely through both tables exposing the brain beneath which could be seen and felt pulsating synchronously with the heart. The prognosis did not look hopeful.

The pathologist reported the tumor to be malignant.

Pain and bleeding stopped, the odor disappeared, the wound began to granulate, and the general condition of the patient improved greatly. When epithelium began to grow along the margins of the bare area skin grafts were applied, most of them took, and the patient left for his home in Manchuria with the greater part of the raw surface covered with new epithelium.

Ten years later he reappeared in almost exactly the same condition as on the former occasion. The wound had never entirely healed but he had carried on his usual work in good health for several years until the mass once more increased in size and broke down.

At operation the same openings in the skull were seen and the fingers again palpated the underlying brain. There seemed to have been no further involvement of skull or brain and there was no impairment of the central nervous system. The results this time was similiar to those formerly secured.

The patient was advised not to wait so long if the tumor began to give trouble but to go to a certain hospital in Manchuria much nearer his home. I learned later from the surgeon there that he had come on two occasions and had sloughing tissue removed.

A woman with a chondroma of the hard palate that had been present for years presented herself for treatment. The mass filled her mouth so that she could not eat, speak, nor close her lips. She had lived for some time on fluids poured in carefully past the mass. The tumor was attached by a short pedicle which was easily severed by a pair of curved scissors. A very happy woman, enjoyed a meal of solid food and returned home the same day to tell the tale.

Such were some of the experiences that made medical practice in Korea an interesting adventure.

Scurvy

A Review of the Subject With a Presentation of Six Cases*

JAMES WILSON

(Interne, Halifax Children's Hospital)

IN view of the relative increase in the number of cases of scurvy seen at this hospital recently, and the frequency with which it has been misdiagnosed, it has been considered worthwhile to review the subject with a presentation of six cases, among which one death occurred.

Scurvy in this province is generally considered to be a disease which is not as common as it was a few years ago. Apparently this is not so, and this is unfortunate as it reflects a degree of ignorance on the part of the population, and a failure on the part of the medical profession to carry out proper preventive measures.

Scurvy is more commonly seen in infants, but does occur in adults who suffer from dietary deficiencies, sometimes referred to as "bachelor's disease." It must also be realized that latent scurvy with its milder symptoms is frequently found, if looked for, although most of these cases cure themselves and are not diagnosed, as a result of the natural increase in diet which normally occurs as the child grows older. The infantile form of scurvy, or so-called Möller-Barlow's disease, is the one that will be considered more particularly in this paper.

The etiology, of course, is primarily a deficiency of Vitamin C (i.e., ascorbic acid), hence it is worthwhile to review the physiology and biochemistry of Vitamin C. Man, unlike certain animals, is unable to synthesize ascorbic acid, and is therefore wholly dependent on his intake (of vitamin C). The exact role of vitamin C in the physiology of the body has not been fully determined. It is thought to be a part of the oxydase enzyme systems. Its main function is the regulation of the colloid condition of intercellular substances, and it also plays a role in the normal metabolism of protein and amino acids. A deficiency, therefore, affects the collagen of all fibrous tissue structures, matrices of bone, dentin and cartilage, and all non-epithelial cement substances, including that of vascular endothelium. There are indications that it is related to complement and thus has an immunological effect.¹

Vitamin C is absorbed from the gastro-intestinal tract and its absorption is interfered with in diarrhoea. It is found distributed in all parts of the body but is in relatively greater concentration in glandular tissue. Plasma levels vary widely; 1-2 mgm. % indicate complete saturation of the tissues, while levels above 0.6 mgm. % suggest a satisfactory state of vitamin C nutrition. Levels below 0.3 mgm. % suggest inadequate intake, whereas in well-developed, clinical scurvy the plasma level is usually 0. The tissue content is usually higher, and evidence is had that there is storage of vitamin C in the body.

Clinical scurvy is never seen under 6-8 months of age, although latent scurvy can be detected much earlier. It becomes apparent in an infant only

*These cases were seen in the wards of the Halifax Children's Hospital. I wish to express my gratitude to Dr. M. J. Carney and Dr. G. B. Wiswell for rendering the clinical material available, and for their valued advice in preparing this paper.

after three months on a vitamin C deficient diet. It has been shown experimentally in humans that low plasma levels can exist for months without any signs developing and with no impairment of optimal health.² When, however, the vitamin C content of the tissues begins to fall, clinical scurvy appears.

Excretion is via the kidney. It is a threshold substance with a critical level of excretion in the vicinity of 1.4 mgm. per 100 cc. of plasma. In levels above the threshold, it is excreted in large amounts, hence large doses give little rise in the plasma levels unless a deficiency exists, in which case there is little excretion until the tissues are saturated. Renal damage causes a lowered renal threshold. The threshold is also lowered during infections, as a result of increased utilization.

Various figures are given as to the daily vitamin C requirements. Optimum amounts are 30 mgm. per day for artificially fed infants, 50-75 mgm. per day for children, 75-90 mgm. per day for adolescents, 70-75 mgm. per day for adults, 100 mgm. per day during pregnancy, and 150 mgm. per day during lactation. A daily intake of 25 mgm. for adults may be adequate, but is insufficient to meet emergencies, as in febrile diseases.³

Vitamin C is readily oxidized in aqueous solutions. The destruction is accelerated in alkaline solutions and by heating. Copper acts as a catalyst and contributes to the destruction. These factors, when forgotten, play an important role in the production of scurvy. The citrus fruits, tomatoes, berries and cabbage are rich sources of vitamin C; leafy vegetables, apples, bananas, potatoes, green peas are fair sources. The vitamin C content of fresh fruit varies from season to season and increases as the fruit ripens. A portion is lost during storage. Proper canning does not materially reduce the content of juices, but there is a loss in canned vegetables. Milk is a poor source. Human milk contains 4.7 mgm. % but cow's milk contains only one-third of this amount. The ascorbic acid content of orange juice is fairly constant, being 0.5 mgm. per cc.

The pathological changes are due to the inability of the tissues of mesenchymal origin to produce intercellular substances. Lack of intercellular cement of the vascular endothelium results in haemorrhages occurring at sites of stress due to motion, growth, injury or infection. The pathological changes in the bones are of special interest because they make possible an understanding of the roentgenographic changes in scurvy. Deficiency of intercellular substance is manifest in the growing bone by lack of matrix or ostroid tissue at the diaphysis proximal to the zone of preparatory calcification, giving the X-ray appearance of diminished density or rarefaction. This predisposes to fracture and epiphyseal slipping. At the same time cessation of growth permits an intensification of calcification at the zone of preparatory calcification at the epiphyseal end of the long bones and at the periphery of the epiphyseal centres of ossification—the "white line of scurvy." Thinning of the cortex and trabeculae give the shaft a ground glass appearance. Reabsorption of the alveolar processes results in a loosening of the teeth. Degenerative changes occur in other organs: the heart and liver show fatty infiltration, there is degeneration of the skeletal musculature and atrophy of the testicles. Anaemia and scurvy need not co-exist.⁴

The clinical picture presents an insidious onset over a period of months, with loss of appetite, increased irritability, defective development, and diminution or absence of weight increase. A history will be elicited that the child

did not have vitamin C in its diet, particularly in infants of the poorer classes. Often, however, particularly in the better class of parents, it will be found that the child has received orange juice. In such cases it is important to inquire carefully as to the manner in which it was given, and how often, and in what quantities it was given. Occasionally it is found that sodium bicarbonate is added to the orange juice and the mixture heated before feeding, or that the orange juice was added to the milk before it was heated. Any fruit juice so prepared loses practically all of its anti-scorbutic value. Some infants dislike the taste of fruit juices and refuse them persistently. The quantity given may be deficient. Or, if breast fed, it may be found that the mother's diet is deficient in vitamin C. In other cases with an apparently adequate intake, infection, chronic gastro-intestinal disturbances or renal lesions may be the underlying cause of a deficiency.

As the disease progresses, haemorrhagic tendencies make their appearance, often appearing first as petechiae about the hair follicles on the legs. Echinosis appears in areas subject to pressure or trauma, particularly on the shins. There may be haemorrhages into any of the serous cavities or mucosal surfaces. Microscopic haematuria is almost a constant feature, while gross haematuria and malaena are occasionally seen in the more severe cases. Orbital haemorrhage, producing exophthalmos is rare, but was recently seen in one of our cases. Changes in the gums are most marked when the teeth are erupted. The gums become spongy, are bluish purple, and bleed readily. Often there is a marked gingivitis.

A general tenderness is early noticeable, and is particularly marked about the lower extremities. This pain and tenderness causes the child to be very apprehensive, and this is noticed in the facial expression. The child will often begin to cry merely on the approach of the examiner. Movement of the legs is extremely painful and will give rise to a "screeching" type of cry. The pain results in a pseudo-paralysis, and the legs assume a characteristic "frog position," which consists of semi-flexion of the hips and knees while the hips are rotated outward. An edematous swelling appears first on the thighs, then on the legs, and may give the erroneous appearance of a well-nourished child. Sub-periosteal haemorrhages occur only when the involvement of the bone has reached an advanced stage. The changes in the bone predispose to fracture and epiphyseal slipping. There may be marked rosary and depression of the sternum. The angulation of the "scorbutic beads" is usually sharper than that in rachitic rosary, since it is produced by a subluxation at the costochondral junction. There is enlargement of the heart, particularly of the right ventricle. Murmurs may be heard at the base, and the pulse is irregular and feeble. There is a tendency toward failure of renal function with oliguria and albuminuria. A low grade fever with a degree of anaemia and normal white count are present. Usually, however, the lowered resistance results in secondary infection.

The diagnosis is based on the history of a vitamin C deficiency, the clinical picture of retarded development, apprehensiveness, pseudo-paralysis, edematous swellings, echinosis, extreme tenderness of the joints, the appearance of the gums, and the scorbutic rosary. The X-ray appearance is characteristic. It is most marked and develops first in the knee, then the shoulder, ankle, wrist, hip and elbow are involved in that order. The white line of well-calcified cartilage is seen at the metaphysis and about the epiphyseal

centres of ossification, which have a ground-glass appearance. Under the white line at the metaphysis is a zone of rarefaction. In active scurvy the subperiosteal haemorrhages are not visible but during healing become calcified and present a striking dumbbell appearance. Years later oval, definitely circumscribed areas of rarefaction may be seen in the interior of the epiphyseal centres of ossification and are always bilateral.⁵

Various laboratory tests are based on the low plasma levels, and low or absent urinary excretion with subsequent levels following the intramuscular or intravenous administration of a single large dose of ascorbic acid. In clinical scurvy, there is little or no rise in the plasma level after four hours, and no increase in the excretion in twenty-four hours. At the time these cases were admitted to hospital laboratory facilities were not available to carry out these tests, but have recently been made available.

The appearance of a fully developed case of scurvy is typical and should never present a problem in diagnosis, particularly if the condition is kept in mind. However, if it is not thought of, it produces a confusing picture. In the earlier stages the diagnosis is more difficult but should not present any great problem. In such cases the therapeutic test is of great value. In atypical cases acute arthritis, osteomyelitis, syphilis, poliomyelitis, blood dyscrasias, dysentery and haemorrhagic nephritis may have to be ruled out. It should be remembered that the lesions are seldom pure, the deficiency is frequently multiple, and that secondary infections are prone to occur.

Treatment is prophylactic and curative. Prevention, as always, is most important. The mother should have an adequate intake of vitamin C during pregnancy and lactation. All infants, even breast fed ones, should receive one to two ounces of orange juice, or two to three ounces of tomato juice daily, beginning at about one month of age, with a smaller dose. Infants who reject the fruit juices or react unfavorably to them should be given 25 mgm. of ascorbic acid daily. Premature infants should be given ascorbic acid on the fourth or sixth day. Some recommend giving 25 mgm. of ascorbic acid beginning on the second day, if artificially fed, until old enough to replace by orange juice. Others view the fact that scurvy never develops before six to eight months as sufficient reason to withhold orange juice until the infant is old enough to be more readily adaptable to unnatural substances in the diet, usually about the third month.

The intake of ascorbic acid should be increased in the presence of those conditions which tend to lower the tissue levels, more particularly in infections.

Treatment of an active case may be carried out by administration of orange juice, but more effectively with ascorbic acid. It may be given parenterally, but this is seldom necessary, the oral route being the one of choice. The usual dose is 100 mgm. daily. It is non-toxic, and much larger doses may be used without ill effect, although it is doubtful that larger doses are more effective as the high plasma level results in rapid excretion before it can be utilized by the tissues.

Recovery is rapid; the pain disappears in a few days or a week, but the swelling may require months to disappear. Bodily growth is quickly resumed. In untreated cases death is liable to occur after a few months from malnutrition, exhaustion, or infection.

The following reports are cases which were admitted to the wards of the Halifax Children's Hospital between October, 1946, and February, 1947.

These patients were sent in from widely scattered parts of the province, two from Cape Breton, two from Halifax County, and one each from Annapolis and Lunenburg Counties.*

Case I. J. C., seven month old female infant, admitted October 6, 1946, discharged October 28, 1946. One month before admission parents noticed that moving the child's legs made her cry with pain. Condition had gradually become worse. No swelling of the legs was present. Family and past history were non-contributory. The child's formula consisted of three ounces of Nestles milk with four ounces of water. She also received a teaspoonful of orange juice and seven drops of cod liver oil daily.

Physical examination: 12 pound, 10 ounce infant of good nutrition, lies with knees drawn up, cries when legs are touched, movement of knee joints is particularly painful. Physical examination otherwise revealed normal findings. Temperature on admission was 100.2°. On the following day it rose to 105°.

Urinalysis showed an occasional pus cell. Blood: red blood cells, 4,550,000, white blood cells 25,000, hemoglobin 12.4 grams. Cerebro-spinal fluid: normal. Stools: negative for typhoid organisms. X-ray of chest was negative for parenchymal disease. X-ray of femur and tibia showed "Sclerosis of the lower end of femur and upper end of tibia, with decalcification of the epiphysis. This picture strongly resembles scurvy."

Patient was given vitamin C, 50 mgm. b.i.d. Three days later the temperature was still elevated (103°). Child was started on penicillin 5,000 units q.3.h. After six days of penicillin therapy and ten days of vitamin C therapy temperature returned to normal. Seven days after vitamin C therapy was started child's legs showed marked improvement. Child would kick legs about and palpation did not cause pain. Referring diagnosis: Osteomyelitis. Admission diagnosis: Scurvy. Final diagnosis: Scurvy.

Case II. S. B., 9 month old male infant, weight fourteen pounds, two ounces, admitted October 14, 1946. History: Two months previously swelling appeared, first about right thigh, then left thigh, involving the knees and gradually extending downward into the legs. Child would not move legs voluntarily. Movement painful. Phimosi, oliguria and dysuria were present. Two weeks later child fell from carriage, injuring right arm, which became swollen, seemed very lax, and appeared to be "paralyzed." Mouth sore. Dietary history: appetite poor. Mother apparently of low intelligence. Baby was receiving equal parts of evaporated milk and water with one teaspoon of sugar at irregular intervals. No additional food. Was given orange juice, which he vomited, hence it was discontinued. No cod liver oil. Never breast fed.

Physical: Pale, irritable child, cries when examiner approaches, lies in "frog-leg" position. Gums spongy and haemorrhagic. Beading of costochondral junctions. Non-pitting edema involving both lower limbs. No voluntary movements. Legs very painful to palpation and movement. Right arm swollen, lax, no grip in fingers, painful on movement. Abnormal movement and crepitus noted in upper end of humerus. Physical otherwise normal. Temperature 101°. Urinalysis negative.

*In addition, three cases have been seen recently by the Pediatricians in their private practices. Since writing this article two other cases have been admitted to the hospital, one referred as a case of osteomyelitis, the other sent to the Polio Clinic.

X-ray: The upper ends of both tibia and the lower ends of the femora show bony changes and decalcification with sclerosis typical of scurvy. Right humerus "shows fracture through the upper end with marked displacement laterally of the minor fragment."

Treated with ascorbic acid 50 mgm. b.i.d. Beminal injectible / cc. daily. Temperature ranged from 100° to 101° for ten days, then returned to normal. After five days of therapy child improved markedly, became less irritable, would laugh and kick legs about. Pain on movement disappeared, but swelling subsided only slowly, and was still present to a moderate degree on discharge forty-five days after admission.

Two weeks after admission an attempt was made to reduce the fractured humerus. Two weeks following manipulation and immobilization in plaster an X-ray showed: "Complete separation of the epiphysis of the upper end of the right humerus with dislocation of the shaft upwards. There is marked elevation of the periosteum involving the whole of the right humerus with some calcification present, having the appearance of a sub-periosteal haematoma. The ribs show marked flaring of the anterior borders. There are also bony changes involving the upper end of the left humerus."

Referring diagnosis: Poliomyelitis? Uremia? Admission diagnosis: Multiple vitamin deficiency. Final diagnosis: Scurvy.

Case III. W. M., nine months old male infant, admitted December 25, 1946. Weight seventeen pounds, four ounces. History of haematuria, two weeks' duration. Upper respiratory infection with otitis media, four days' duration. Swelling and pain on movement of left leg for two days. Dietary history not obtained.

Physical examination: Listless, irritable child, of good nutrition, lies with legs in "frog position." Both legs show moderate, non-pitting edema, painful to touch and on movement. Evidence of upper respiratory infection. Otherwise negative. Temperature 105°.

Laboratory: Urinalysis—15-20 red blood cells, 8 white blood cells, per h.p.f. Few casts. Albumin ++. Blood: red blood cells, 2,820,000, Hemoglobin 9.5 grams, white blood cells, 23,250. 37% polys, 62% lymphs, 1% monos. Urine culture: sterile. X-ray of chest negative. Non protein nitrogen, 25 mgm. %. Kahn negative. Patch negative.

X-ray of both femora and right arm, "Films show widening and a white line at the distal ends of the bones with decalcification of the epiphysis, having the appearance of scurvy."

Treatment: Penicillin 10,000 units q.3.h. Ascorbic acid 500 mgm. daily for five days, then 200 mgm. daily for another five days, then 100 mgm. daily. Vitamins and iron.

Temperature gradually returned to normal over a period of two weeks. Urine showed a gradual improvement over a similar period. There was a gradual fall in the white blood count, to normal. The red blood count was 3,460,000 with hemoglobin of 9.1 grams at the end of this period. The sedimentation rate was normal. At the end of two weeks the child was less irritable, the swelling of the legs had subsided and they were no longer painful. At no time was there edema of the face. Referring diagnosis: Nephritis. Admission diagnosis: Acute glomerulo-nephritis and scurvy. Final diagnosis: Scurvy complicated by acute glomerulo-nephritis.

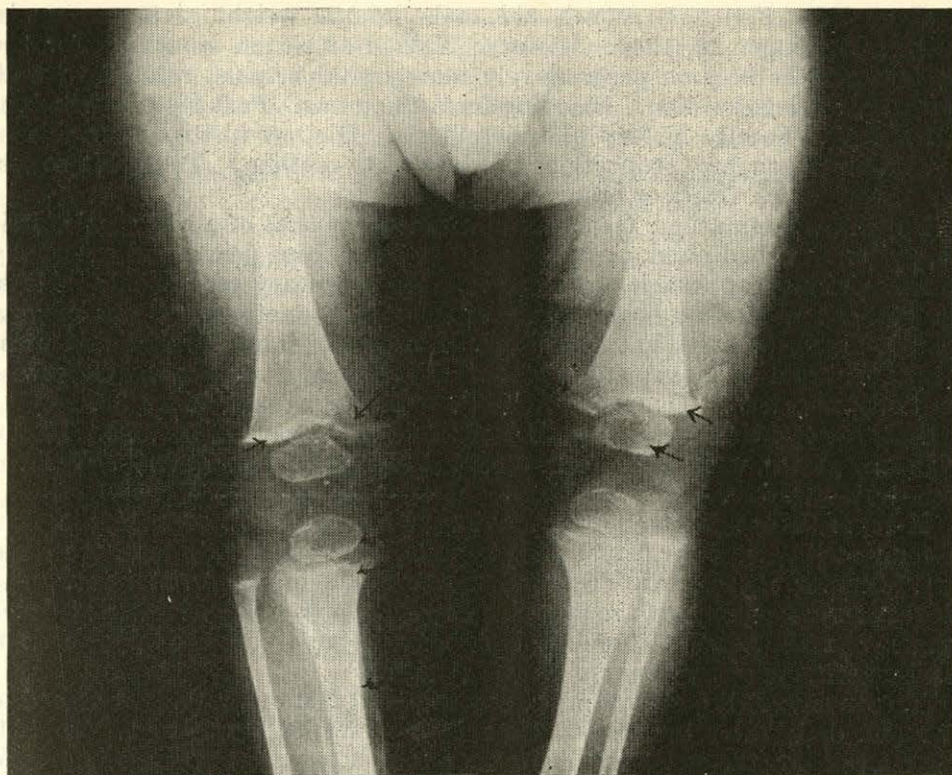


Fig. I. Typical X-ray appearance of scurvy (see text). Note periosteal elevation on right tibia.



Fig. II. Subperiosteal haematoma of humerus with calcification evident.

Case IV. Fourteen month old male infant, weight sixteen pounds, admitted December 28, 1946. History: Walked at eleven months. For the past two months became progressively more irritable, pale, refused to walk or crawl, both legs swollen. Bleeding from the gums. Past history was non-contributory. Family history of tuberculosis. Dietary history: Formula of milk, water and sugar, (proportions not known to mother.) Tea. No soups, cereals, vegetables, fruits or orange juice.

Physical examination: General appearance was that of a very pale, irritable, undernourished child, lies quietly in bed with hips flexed and externally rotated. Cries on approach of examiner. No voluntary movements of legs. Craniotables and marked beading of costo-chondral junctions. Gums spongy, infected, blue-grey, with haemorrhages. Both lower limbs swollen and painful to touch, and on movement. Moderate enlargement of heart. Otherwise essentially negative. Temperature 102°, pulse 160, respirations 35.

Laboratory: Urine negative. Blood: Red blood cells, 3,700,000. Hemoglobin 12.7 grams, white blood cells 6,950. Polys 35%, lymphs 63%. Vollmer patch test, positive.

X-rays: "Knee joints show widening of the epiphysis of both the tibia and femur with slight periosteal elevation along the inner margin of the tibial shaft. Similar changes are observed in the bones of the wrist joint. The changes are in keeping with scurvy." X-ray of chest, "Negative for evidence of parenchymal disease. There are bony changes involving the upper ends of both humeri suggesting scurvy."

Treatment: Full diet, vitamins, ascorbic acid 500 mgm. daily, reduced to 250 mgm. daily after two days. Temperature settled down to 99° to 100° after a week but the pulse remained over 140. Condition of gums improved rapidly and general irritability lessened somewhat and legs were no longer painful after three days. Swelling of legs persisted up until time of discharge twenty-five days after admission. Child was taken home before completion of treatment, and against the advice of the attending physician.

On discharge, red blood cells were 4,450,000, hemoglobin 11.1 grams, white blood cells 9,000, with polys 24%, lymphs 68%. Re-X-ray of chest was negative.

Referring diagnosis: Malnutrition. Admission diagnosis: Scurvy. Final diagnosis: Scurvy, tuberculosis—status undetermined.

Case V. C. A., twelve months old male infant, weight sixteen pounds, eight ounces, admitted February 11, 1947.

History: Five months before admission swelling appeared spontaneously over left frontal region, increased progressively in size to that of a baseball in four days. At about the same time it was noted that the child did not move his legs, refused to walk, legs were painful to move and were kept in a semi-flexed, laterally rotated position. There was also oliguria and dysuria. Child was hospitalized. Circumcision performed. The swelling was aspirated and dark blood obtained. He was discharged after one month, improved. Two weeks later dysuria returned and intermittent hematuria occurred. Child refused all foods except his bottle. Prior to this he had been receiving cereals, pabulum, vegetables, orange and tomato juice, but no cod liver oil. One month before admission a swelling appeared spontaneously over left parietal region, followed three days later by a second swelling just posterior to this. Both increased in size until they became confluent. The legs had again become

swollen and tender. Child became acutely ill with high temperature, convulsions, labored respirations, dysuria and hematuria. He was readmitted to hospital and treated with penicillin. Swelling on head was treated with heat and subsided. After two weeks he improved somewhat and was referred to the Halifax Children's Hospital. Past and family history: nil of note.

Physical examination: Very pale child of poor nutrition, sweating, very irritable, cries when touched. Bossing of frontal bones. Slightly elevated soft swelling, left parietal region, about two inches in diameter. Marked beading of costo-chondral junctions. Gums show evidence of old and recent haemorrhages. Thighs and knees flexed. Moderate degree of non-pitting edema. Very tender to touch. Movement causes child to scream with pain. No voluntary movements of legs. Moderate degree of lateral bowing of tibia. Moderate degree of enlargement of heart. Physical otherwise essentially negative. Temperature 100°.

Treatment: Ascorbic acid, 100 mgm. stat. 50 mgm. b.i.d.

Eight hours after admission the child died quietly and quite unexpectedly. Apparently the two hundred and fifty mile trip had proven too exhausting.

Urinalysis: No red blood cells, white blood cells, or casts. Albumen negative. X-rays and blood pictures were not done as the child was admitted at night and died before morning.

Referring diagnosis: Rickets. Admission diagnosis: Scurvy.

An autopsy was performed. The following is an excerpt from the report:

Head and neck: Gums were swollen, haemorrhagic, with some dried blood adherent to margins. A soft swelling extended over left parietal region, which, when scalp was deflected, was found to be a subperiosteal haemorrhage. This was undergoing organization. Both frontal bones had several dark areas of old blood pigment.

Brain: Showed marked edema and congestion with flattening of the convolutions but no evidence of haemorrhage or softening.

Thorax: Sternum flat and depressed with subluxation at the costo-chondral junctions. Beading of the ribs was present.

Lungs: Small petechial haemorrhages were present beneath the visceral pleura.

Heart: Petechial haemorrhages were visible over the surface of the heart. The right ventricle was slightly dilated.

Kidneys: Petechiae present in cortices.

Lower end of right femur was examined, and subperiosteal haemorrhage found.

Histological examination of organs: nil of note.

Anatomical diagnosis:

1. Scurvy.
2. Subperiosteal haemorrhages, left parietal region, right femur.
3. Constipation (Impacted feces).
4. Subluxation of costo-chondral junctions.

Case VI. J. E., eleven months old female infant, weight sixteen pounds four ounces, admitted January 22, 1947. One month before admission parents noticed pain on movement of child's legs—at first in the hips. Several days

later pain appeared in knees and then ankles. Local heat failed to relieve the pain. Swelling appeared about the knees and extended into the thighs, legs and feet. The swelling was not constant, but would vary from time to time. Child refused to use legs. She would keep them in an extended and slightly abducted position. Child had been listless, appetite was poor, and for the two weeks prior to admission she had been vomiting. The dietary history was, unfortunately, not inquired into.

Physical examination: Fairly well nourished baby, pale, very irritable, cries when handled. Slight edema of scalp over occiput. Haemorrhage about lower central incisors. Beading of costo-chondral junctions. Both lower limbs held in "frog position." No voluntary movements. Non-pitting edema of both lower limbs, more marked on left. Painful to touch and on passive movement. Physical was otherwise essentially negative. Temperature 104°.

Laboratory: Urinalysis showed trace of albumen. Occasional red blood cell and white blood cell per h.p.f. Red blood cells, 3,190,000. Hemoglobin 6 grams. White blood cells, 11,300, with polys 33%, and lymphs 64%. Reticulocyte count 3.25%. Kahn negative.

X-ray: "Both forearms, femora and lower legs: Films taken show white line at the distal ends of the bone with some widening of the metaphysis and decalcification of the epiphysis, having the appearance of scurvy.

Treatment: Ascorbic acid 500 mgm., then 100 mgm. daily. Penicillin 10,000 units q.3.h. 250 cc. whole blood, followed in two days by 100 c.c.

In five days her temperature returned to normal. Hemoglobin was 13.3 grams. No haemorrhage from gums. Legs seemed less tender and painful and the edema had lessened somewhat. Discharged after fourteen days. Still had some edema and tenderness.

Referring diagnosis; Admission diagnosis: Scurvy. Final diagnosis: Scurvy.

Summary:

1. In a period of five months six cases of scurvy have been admitted to this hospital as compared with three cases in the preceding fifteen months. These cases were admitted from widely scattered parts of the province. Two were from urban centres and the remaining from rural communities.

2. In view of this relative increase it was considered worthwhile to review the subject. The physiological and pathological relationship, together with the clinical picture have been presented.

3. The clinical picture of scurvy is characteristic and presents no diagnostic difficulty when kept in mind, but when not thought of it presents a confusing picture. It is most frequently mistaken for osteomyelitis. Emphasis is made that a diet containing vitamin C does not exclude the diagnosis of scurvy.

4. The treatment has been outlined. Prophylaxis has been emphasized.

5. Six illustrative case reports have been presented.

Conclusions:

The number of cases admitted over a short period of time indicates that the physician is not aware of the frequency of scurvy in our population, and that prophylactic measures are not emphasized sufficiently or carried out,

even when antiscorbutic foods are available. It is therefore important to renew our efforts to eliminate this disease, so easily prevented and cured, by properly advising parents of the seriousness of vitamin C deficiency.

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- (4) MacMillan, R. B., Inglis, J. C.: Scurvy, A Survey of 53 Cases, *British Medical Journal*, August, 1944. 233.
- (5) Blitz, D.: Infantile Scurvy, *Journal of Paediatrics*, 1943. 23, 87-89.

Editorial Comment

AT the Annual Meeting of the Society last autumn the Editorial Board asked permission to offer monthly prizes to the students of the Fourth Year for reviews of the current literature. Permission having been granted notices were duly posted in the various buildings and we sat down to await results. We did not expect to be over whelmed with material, but we had hoped that there might be enough to enable us to print possibly one abstract a month. Until two or three weeks ago there was no response whatever and all hope of any material from that source had been abandoned. Then one single paper was submitted, which we publish in this issue. Without wishing to be too fulsome in our praise, we feel that this paper shows considerable merit, and that, if this is the calibre of the work our Fourth Year students can do, it seems a pity that we do not see more of it. Perhaps the incentive has not been great enough, or perhaps, in this as in so many other things, our people are slow starters. We are inclined to the latter opinion, and shall await further developments along these lines with considerable interest.

* * * * *

In the April number of the Canadian Medical Association Journal there appears the complete programme of the Winnipeg meeting. A statistical survey of this programme cannot but give rise to the impression that something is wrong, somewhere. Tallying the various items on the programme, without regard to whether the same name appears more than once (and such repetition, although it occurs is rare,) we get the following figures:

Total number of items	182
<i>Territorial distribution:</i>	
Manitoba (Winnipeg)	66
Ontario (various centres)	49
Quebec (mostly Montreal but 1 St. Hyacinthe & 1 Quebec City)	27
British Columbia	12
Alberta	10
Saskatchewan	5
New Brunswick	2
U. S. A.	11

As we have said there is some duplication, since New Brunswick, although appearing twice in the program, is represented on both occasions by the same man. So we have the interesting situation that at the Annual Meeting of the Canadian Medical Association, an organization presumably representative of all *nine* provinces of the Dominion, three of them are represented on the programme in the person of one man, representation which is no doubt quite adequate in quality but woefully lacking in quantity. Even French Canada, which certainly constitutes an absolute minority in membership in the Canadian Medical Association, is represented by at least six names.

We do not know why this situation exists, but we feel sure that an explanation would be of great interest to our readers. It is, of course, obvious that the city in which the meeting takes place will have an extra proportion

of the speakers. It is, in fact, part of the price of hospitality, although, at 66, the price might seem excessive. It is also obvious that at any such meeting the bulk of the speakers will be drawn from centres where there are medical schools and big hospitals. But neither of these undoubted facts can account satisfactorily for such gross disproportion.

Of course, it is possible that a number of doctors from the three Maritime Provinces were approached, and all with one accord began to make excuse. Or perhaps the system is that the men are expected to offer themselves as speakers on the programme, and no one offered. If either of these hypotheses is the correct explanation, than it can only reflect discredit on the three Eastern provinces, and there is indeed something very much wrong, right here in the east.

But the third possibility is that no one was asked, or possibly only one or two who were unable to accept. Not to put too fine a point upon it, *if* the Programme Committee is in any way responsible for selecting its speakers, we feel that, in addition to the first duty of seeing that the material presented is the finest possible, it has a further responsibility of seeing to it that all divisions of the C. M. A. have some measure of representation on the programme. We suggest that the discharging of the second responsibility need in no way interfere with the first, and indeed that the two policies might prove to be complementary each to the other.

Speaking for the senior Medical Society in Canada the Editorial Board of the Nova Scotia Medical Bulletin is of the opinion that an explanation of this matter should be forthcoming.

* * * * *

Life Magazine of April 21st has a very excellent special article on Cancer, written no doubt in timely support of the campaign of the American Cancer Society, and the concurrent campaign of the Canadian Cancer Society, both of which were on in the month of April. There are to-day on every hand many signs that the public is becoming "cancer conscious," a state of affairs greatly to be desired. But if the public reads, marks and learns many reports on cancer like the one in Life, there is a very real danger that it will soon be at least as well informed on the subject as most doctors, and better informed than many.

It is obvious that the remedy for the situation is not for the public to be less well-informed, but for the medical profession to be more so. Also, in view of the vast research plans even now being made, we can see that keeping informed is of increasing importance.

This Editorial Board has for some time been considering how it might contribute to this end. A special cancer number was considered, but certain special articles which we had in mind could not be had without considerable delay. It was also felt that we could not deal effectively with the subject in that way. Upon due consideration, therefore, it was decided to adopt the policy of publishing one article on some phase of cancer every month, for an indefinite period. These articles will be fundamental and practical and will be obtained from every possible authoritative source of such material. It is our hope that this policy will meet with approval, and we shall welcome suggestions which will assist in carrying it out. The first of these articles will appear in the Bulletin for June.

MARGARET E. B. GOSSE, M.D.,
Editor-in-Chief.

Correspondence

Ottawa, 5 April, 1947

Dr. H. G. Grant
Dean of the Faculty of Medicine
Dalhousie University
Halifax, N. S.

Re: Medical Officer with some knowledge of Nutrition

Dear Dr. Grant:

I expect to add to my staff shortly one or more medical officers for nutrition work. These positions may become permanent on satisfactory work, and preference will be given to veterans. I believe that these positions will interest recent medical graduates, who may at present be taking training that could be considered as useful for the work to be done (for example, public health training, or internship in paediatrics), or who have had special experience with foods, catering or nutrition in one of the Services.

Since you may know some recent graduates who would so qualify and be interested, I am appealing to you to send them a copy of this letter and of the enclosed Civil Service Application Forms as soon as possible. The forms may be returned to me with some advantage, or sent directly to the Secretary of the Commission. I do not think that we will accept less than two years training or experience since receiving an M.D. for these positions, and some kinds of training are much better than others (as suggested above).

The salary will be \$3900 a year, increasing annually to \$4500 a year; and there is always a possibility of reclassification to a higher salary.

The Duties will be under direction to conduct dietary and nutritional surveys, to study methods of assessing nutritional status and to handle special assignments including public relations duties, in the field of nutrition.

Hoping for your assistance in locating this type of person, I am,

Yours sincerely

L. B. Pett, Ph.D., M.D.

Chief, Nutrition Division

35 John Street
Ottawa, Ontario
19th April, 1947

Dr. H. L. Scammell
Registrar
College of Physicians and Surgeons
Dalhousie University
Halifax, N. S.

Dear Dr. Scammell:

A situation has recently arisen which we consider should be drawn to the attention of the medical profession, and we therefore request that you notify all your members of the following facts.

A number of fatal poisonings in infants have occurred in the United States that are reported to be associated with the use of rectal suppositories for the prevention and treatment of throat infections. The number of deaths which have resulted is somewhat indefinite, as reports of death and injury continue to be received. The total number of reported deaths to date is about fifteen, some of which have not been completely investigated to determine the exact cause of death.

The active ingredient is bismuth diallyl-acetate (bismuth heptadiene carboxylate). The suppositories are sold in two sizes, namely, adults' and children's, containing respectively 45 mg. and 22.5 mg. of bismuth (as metal) per suppository. In all instances of injury and death, children under the age of six were affected and apparently whole suppositories, either adults' or children's size were administered contrary to the directions for use. Where autopsy was performed, liver damage was almost invariably found, this organ being enlarged and fatty. Toxic quantities of bismuth, however, were not found. It is now believed that any danger in the use of overdoses of the product may be attributable to the organic allyl radical, and also to the narrow margin between therapeutic and toxic doses for infants.

Yours very truly

A. Papineau-Couture

Assistant Director

Food and Drugs Divisions

Canadian National Railway

Halifax, N. S.

May 7, 1947

File C.V. 3115

Dr. H. G. Grant
Secretary, The Medical Society of Nova Scotia
c/o Dalhousie Public Health Clinic
Halifax, N. S.

Dear Sir:

In view of the coming Canadian Medical Association Convention to be held at Winnipeg, Man., June 23rd to 27th, may I supply the following for your information:

Return First Class Rail Fare (30 day limit)		\$99.05
(Identification Certificate Plan)		
Lower berth	Halifax-Montreal	5.45
Compartment (1 person)	“ “	13.80
Compartment (2 persons)	“ “	15.55
Drawing Room (1 person)	“ “	17.25
Drawing Room (2 persons)	“ “	19.55
Lower berth	Montreal-Winnipeg	\$11.50
Compartment (1 person)	“ “	28.75
Compartment (2 persons)	“ “	32.35
Drawing Room (1 person)	“ “	34.50
Drawing Room (2 persons)	“ “	40.25

All quotations include tax.

May I also mention that there are a number of optional routes available to all passengers and full information will be supplied on application to this office or any of our representatives.

The following sample itinerary will give all concerned a good idea of the actual travel time involved.

	No. 3 Ocean	No. 59 Scotian	No. 1 Maritime	Example
Going	Daily	Daily	Ex. Sun.	
Lv. Halifax	8.00 a.m.	8.15 a.m.	3.10 p.m.	Monday
Ar. Montreal	7.00 a.m.	8.45 a.m.	7.05 p.m.	Tuesday

No. 1 Transcontinental Limited

Lv. Montreal	8.20 p.m.	Tuesday
Ar. Winnipeg	10.10 a.m.	Thursday

No. 2 Transcontinental Limited

Returning				
Lv. Winnipeg		6.45 p.m.	Friday	
Ar. Montreal		9.00 a.m.	Sunday	
	No. 2 Maritime	No. 4 Ocean	No. 60 Scotian	
	Ex. Saturday	Daily	Daily	
Lv. Montreal	11.30 a.m.	8.00 p.m.	8.15 p.m.	Sunday
Ar. Halifax	6.00 p.m.	7.50 p.m.	10.30 p.m.	Monday

"All times quoted are standard"

In connection with the above we will gladly supply full information and also arrange whatever reservations may be desired.

Yours very truly

W. C. Moir, Jr.

District Passenger Agent

The following pertinent transportation facts are given by the Canadian Pacific Railway in connection with the Annual Convention of the Canadian Medical Association, at Winnipeg, June 18-27, 1947:

Fares

Reduced Convention fare of regular First Class one-way fare, plus one-third, plus 25c Validation fee, for the round-trip has been authorized under the Identification Certificate Plan, for members and dependents accompanying them.

Limit

Tickets will be good for passage on the going journey from June 13 to June 22, and return limit will be 30 days from date of sale.

Identification Certificates

Railway tickets will be sold upon presentation of duly completed Identification Certificate, which are obtainable from Dr. T. C. Routley, General

Secretary, Canadian Medical Association, 135 St. Clair Ave. W., Toronto 5, Ont.

Cost of Tickets

Railway: Halifax to Winnipeg and return, on Identification Certificate Plan..... \$99.35

Sleeping Car:

Halifax to Montreal

	Via Digby and Saint John	Via All Rail	Montreal to Winnipeg (Direct)
	(1)	(2)	(3)
Lower Berth.....	\$ 4.05	\$ 5.45	\$11.50
Parlor Car.....	.95
...Compartment.....	10.35	13.80	28.75
*Compartment.....	11.50	15.55	32.20
...Drawing Room.....	12.65	17.25	34.50
*Drawing Room.....	14.95	19.55	40.25

..One Passenger

*Two or more passengers

Note.—In Column (1), Parlor Car fare is from Halifax to Digby; and Sleeping Car fares are from Saint John to Montreal. In Column (2), Sleeping Car fares are CNR, via Moncton and Campbellton.

Other information in connection with routing via the Great Lakes or Post Convention Tours, etc., can be obtained from A. C. MacDonald, General Agent, Canadian Pacific Railway, 413 Barrington Street, Halifax, N. S., who also will make through reservations and issue complete tickets.

IMPORTANT NOTICE

The attention of the Medical Profession is drawn to the increasing number of specimens received at the Division of Laboratories, Halifax, without any information regarding the **name** and **address** of the physician sending the specimens or the **identification of the patient**. Last year more than 700 specimens were received on which, for this reason, no report could be sent. Please be sure to enclose a data sheet with each specimen which includes your name and address.

New San at Moncton

Canadian Tuberculosis Association Bulletin, March, 1947.

With the opening of the Moncton Tuberculosis Hospital the latter part of January, another link was forged in the chain of sanatoria throughout the province of New Brunswick. The new tuberculosis hospital, the fifth in the province, has been created out of the building which formerly housed the general hospital for the R.A.F. and R.C.A.F. personnel depots during the war. Although only 75 patients were admitted at first because of the shortage of trained staff, the hospital will eventually accommodate 200.

Dr. P. M. Knox, medical superintendent of the new institution, expressed the opinion that the full effectiveness of the hospital will probably not be felt in the province for three or four years, it will take that long to relieve the congested state of New Brunswick's treatment facilities.

Summer Diarrhea in Babies

Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the 24-hour formula and replaced with 4 packed level tablespoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of Dextrin-Maltose may safely be added to the formula and the Casec gradually eliminated. One to three packed level teaspoonfuls of a thin paste of Casec and water, given before each nursing, is well indicated for loose stools in breast-fed babies. For further information, write to Mead Johnson & Company, Evansville 21, Indiana.

FOR SALE

1 Office Table, white enamelled steel with stirrups and black leatherette table pad.....	\$60.00
American stainless instrument Sterilizer, size 16 x 6 x 4 with white enamelled steel stand.....	75.00
1 set Jars (6) for sterile goods.....	6.00
White enamelled instrument tray with cover.....	3.00
Burton Fresnel Medical Light (floor stand model).....	20.00
Sphygmomanometer (spring type).....	15.00
Vaginal Speculum—Graves.....	5.00
Ives Proctoscope.....	8.00
Simpson's long Obstetrical Forceps (stainless steel).....	20.00
Placenta forcep.....	2.00
Uterine Curette.....	2.00
Gauze packer uterine.....	2.50
Suture clip forceps—combined applying and removing.....	6.00

Apply to S. Y. SHIREY, M. D.
Shelburne, N. S.