Sarcoidosis*

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WITHIN comparatively recent years there has been a renewal of interest in a disease which presents features of exceeding interest to the internist, namely sarcoidosis. Patients have come to the Sanatorium because of shadows cast on the X-ray film, identical with those thought to represent tuberculosis, but following careful examination, mildness of symptoms, failure to react to the tuberculin test, with sputum findings negative for acid-fast bacilli, tuberculosis has been ruled out. Among the diseases which show such shadows by roentgenogram in the pulmonary fields, none call for greater attention and study than Boeck's Sarcoid or Sarcoidosis. There are other names or terms which have at one time or another been applied to this confusing disease: Lupus Pernio, Benign Miliary Lupoid, Besnier-Boeck's disease, Benign Lymphogranulomatosis, Non-Caseating Tuberculosis, Chronic Miliary Tuberculosis, Schaumann's disease.

Historical: The disease was first described in part by Jonathan Hutchinson in 1869. In 1889, Besnier gave a description of an infiltrating lesion of the skin which he called "Lupus Pernio." Ten years later appeared the important publication of Boeck in which he described the nodules of the skin as multiple benign sarcoids or lupoids. In 1909, the Danish ophthalmologist, Heerford, calls attention to the syndrome of iritis or iridocyclitis, accompanied by afebrile subacute swelling of the parotids and bilateral facial paralysis under the all-inclusive term of "uveo-parotid fever." Six years later, Kuznitsky and Bittorf reported a case of cutaneous sarcoidosis with evidence of marked changes in the lymph nodes, spleen, and lungs. In 1919, Jungling in his cases described characteristic radiological changes in the digits, metatarsal and metacarpal bones which he referred to as "ostitis tuberculosa multiplex cystoides." It was, however, the brilliant microscopical work of Schaumann that showed these apparently independent clinical entities to be part and parcel of the same condition. The terminology of the disease has remained confusing for years. It is to be noted that the last edition of the Standard Nomenclature of Disease employs the term "Sarcoidosis."

Etiology: The etiology of sarcoidosis is still obscure. Undoubtedly, there is a very definite resemblance clinically and pathologically between tuberculosis and sarcoidosis. Many investigators are of the opinion that the similarity in the two diseases is not at all coincidental and that sarcoidosis is an anergic type of tuberculosis. However, tubercle bacilli have never been recovered from the lesions and the tuberculin tests when given are generally negative. In support of this theory and the many common features of both diseases, Pinner has recently called attention to the point that the great majority of people who finally succumb to sarcoidosis are found to have advanced caseous tuberculosis. On the other hand, there are well informed internists who believe this disease is due to a virus of unknown etiology which acts on the reticuloendothelial system stimulating tubercle formation. The disease may occur in any period of life, but is most common in patients from fifteen to forty. Sex has no influence and there is little preference for races, although it is slightly more common in the negro.

Pathology: Sarcoidosis is a disease affecting the reticuloendothelial system. The main organs involved are the lymph nodes, lungs, spleen, the bones,

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skin, parotids, and the uveal tract. The essential microscopical lesion is granulomatous in character. The tubercles are strikingly similar to those found in tuberculosis, consisting of epitheliod cells, macrophages, lymphocytes, giant cells, and the occasional eosinophile. Compact clusters of these nodules are a constant feature no matter what type of tissue is involved. A characteristic difference is the absence of caseation. As the lesion increases in age, fibrosis occurs. Special silver staining often reveals a delicate reticulum absent in tuberculosis. The changes in the blood picture are not characteristic, except for a very definite alteration in the plasma proteins. The total protein may be elevated due to a marked increase in the globulin fraction and it is quite usual to have a reversal of the albumen-globulin ratio. This phenomenon is not confined to sarcoidosis, but is also present in multiple myeloma, lymphogranuloma venereum and kala-azar.

Symptoms and Signs: The onset of the disease is very insidious. The patient may complain of slight general malaise, anorexia and nausea. The condition is not suspected until some of the typical lesions come to light in the body. Those in the skin are quite characteristic and occur in about 50 per cent of the cases. There may be small discrete nodules, non-tender, on the face, arms and back. At times, in the same area, larger nodes are observed or the disease may manifest itself as a diffuse infiltration of the skin of the face and ears. In many cases, also, small fine nodules are noted at the interphalangeal joints, giving the hands a knotted appearance. The uveo-parotid syndrome manifests itself as a diffuse, generally bilateral, enlargemtnt of the parotids. The glands feel hard and smooth and are not painful. Their function is usually disturbed and dryness of the mouth is often present. With the enlargement, facial palsy occurs in varying degrees. In the eye, the uveal tract is usually affected, but any part of the organ may be the seat of the disease. Disturbances of vision correspond to the amount of ocular involvement. Generalized enlargement of the lymph nodes, usually of the cervical and axillary groups, are frequently seen. The glands are hard, discrete and moveable, with marked enlargement in the mediastinal and hilar regions. Pressure symptoms may occur.

The radiological appearance of the lungs is accountable for the admission of these patients to tuberculosis sanatoria. The most characteristic feature observed in the X-ray film is that of a diffuse miliary dissemination, producing a picture almost identical with that of an acute miliary or a chronic form of hematogenous tuberculosis. In some cases the pulmonary fields show rather dense interweaving linear or strand-like shadows more marked medially with somewhat increased hila, and thinning out peripherally but reaching almost to the pleura. Superimposed upon these may be large and small irregular nodular foci disseminated throughout most of the lung fields, sparing the extreme apices and bases. In lesions of this nature, there is a similarity with pulmonary changes observed in silicosis, in vascular congestion or in lymphangitic carcinomatosis. There is no single type of lesion observed on the roentgenogram, however, that may be considered pathognomonic of sarcoidosis. X-ray films of the small bones may reveal punched out areas in the shafts without involvement of the periosteum.

Diagnosis: In a disease with such widespread manifestations the diagnosis can be quite difficult. The skin lesions, when present, are quite characteristic. The lymph adenopathy may be confused with Hodgkins' Disease and the latter

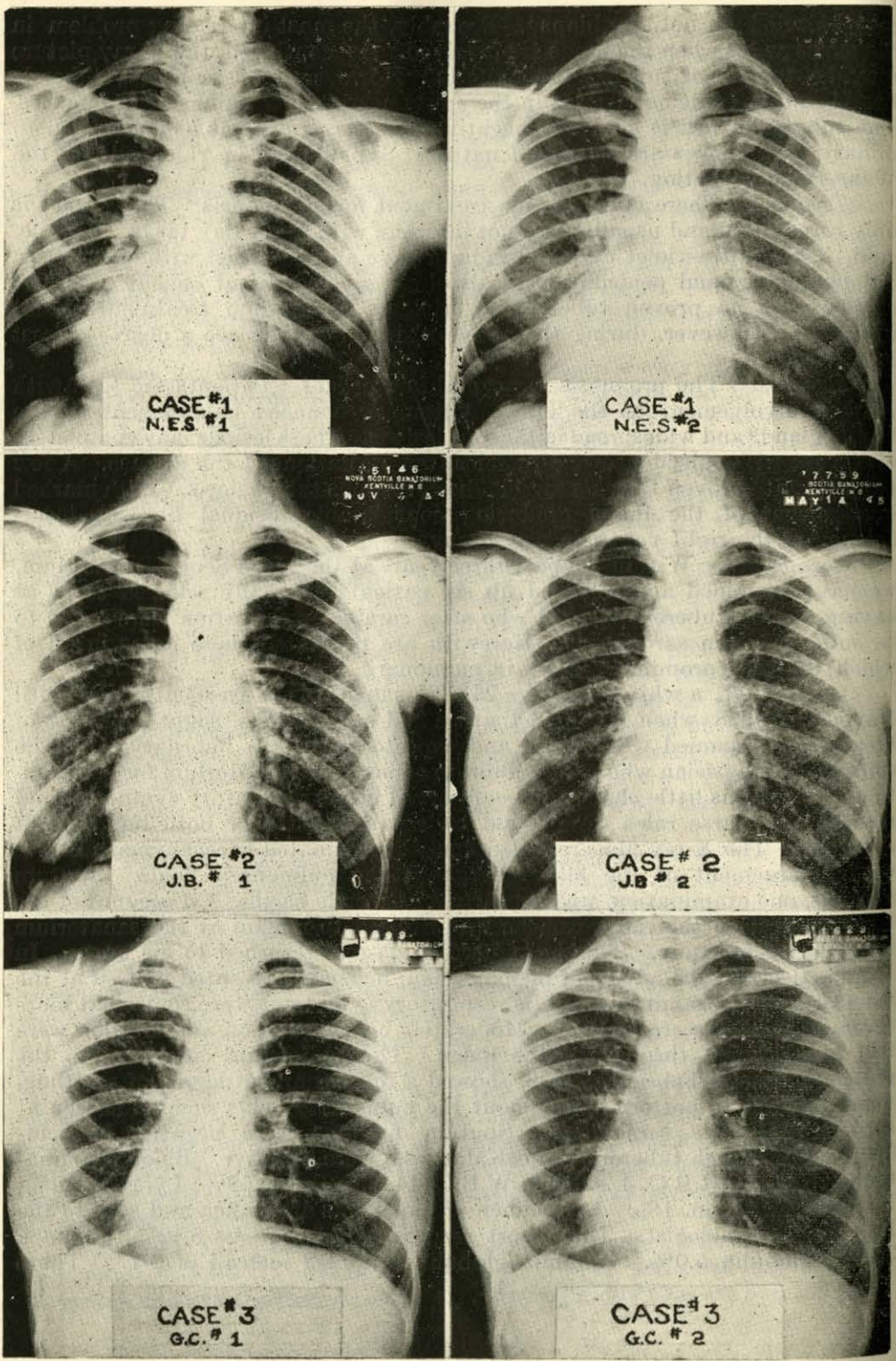
may be ruled out only by biopsy. Probably, the most interesting problem in diagnosis arises when the lungs are involved. As mentioned, the X-ray picture may be typical of miliary tuberculosis. However, in sarcoidosis, tubercle bacilli cannot be demonstrated in the sputum, gastric washings or in biopsies. The tuberculin test is generally negative and the symptoms as contrasted to miliary tuberculosis are of a mild nature. Syphilis can be ruled out by the Wassermann reaction.

Treatment: There is no specific treatment for sarcoidosis. The disease is only rarely fatal and usually does not interfere with every day tasks. Arsenic, gold, X-ray, ultra-violet rays and radium have all been tried without success. Sulphonamides and penicillin have also been given without benefit. As sarcoidosis has no proven tuberculous etiology, sanatorium treatment is not indicated. However, during the active phase of the disease a degree of rest is advised.

Prognosis: The prognosis in general is excellent. Patients are seen with marked involvement of the lungs, spleen, pronounced enlargement of the lymph glands and widespread cutaneous lesions. These lesions may completely disappear with subsidence of all clinical manifestations of the disease. A few patients with proven Boeck's sarcoid die of caseous tuberculosis. With marked involvement of the lungs producing considerable residual fibrosis, insufficiency of the right ventricle may occur.

Case Reports: Within the past three years at the Nova Scotia Sanatorium, we have examined and followed up six patients originally referred to us as having miliary tuberculosis, but who after careful investigation were found to be suffering from sarcoidosis. Herewith are presented these cases in all of which the only prominent lesion is pulmonary.

(1) R. E. S., a white male, age 25—This man was in excellent health until November, 1938, when he noted that he had easy fatigue, slight shortness of breath, accompanied with cough and expectoration. In February, 1939, he consulted a physician who advised him to come to the sanatorium for examination. There was little change to be observed in his respiratory symptoms and moderately coarse rales were found on auscultation over both lungs, front and back. The X-ray films revealed finely disseminated parenchymal changes with enlargement of the hila throughout the pulmonary fields. Sputum analysis, one examination, was negative for tubercle bacilli. On account of the shadows cast on the radiogram he was advised to remain at the sanatorium for a period of study. This he refused to do and returned to his home. In March, 1944, on the advice of his physician, he again presented himself at the Sanatorium for examination. His respiratory symptoms were somewhat more severe than they were in 1939. Moderately coarse rales on auscultation were still to be found throughout the lungs. The radiogram, compared to the previous films of February, 1939, showed a more marked degree of mottling, somewhat fine in pattern, throughout the pulmonary fields such as is seen at times in Boeck's sarcoidosis. Sputum findings were negative for acid-fast bacilli. Patch tuberculin and Kahn tests were negative. Blood examination: Hb. 80%; R.B.C. 4,260,000; W.B.C. 14,500; Polys. 68%; Lymphs. 29%; Monos. 2%; Eosin. 1%. A specimen of blood was also taken and sent to the Provincial Pathologist. The report reads: "Total proteins 8.12%, albumen 3.12%, globulin 5.0%. Albumen-globulin ratio 1-2 instead of 2-1." There

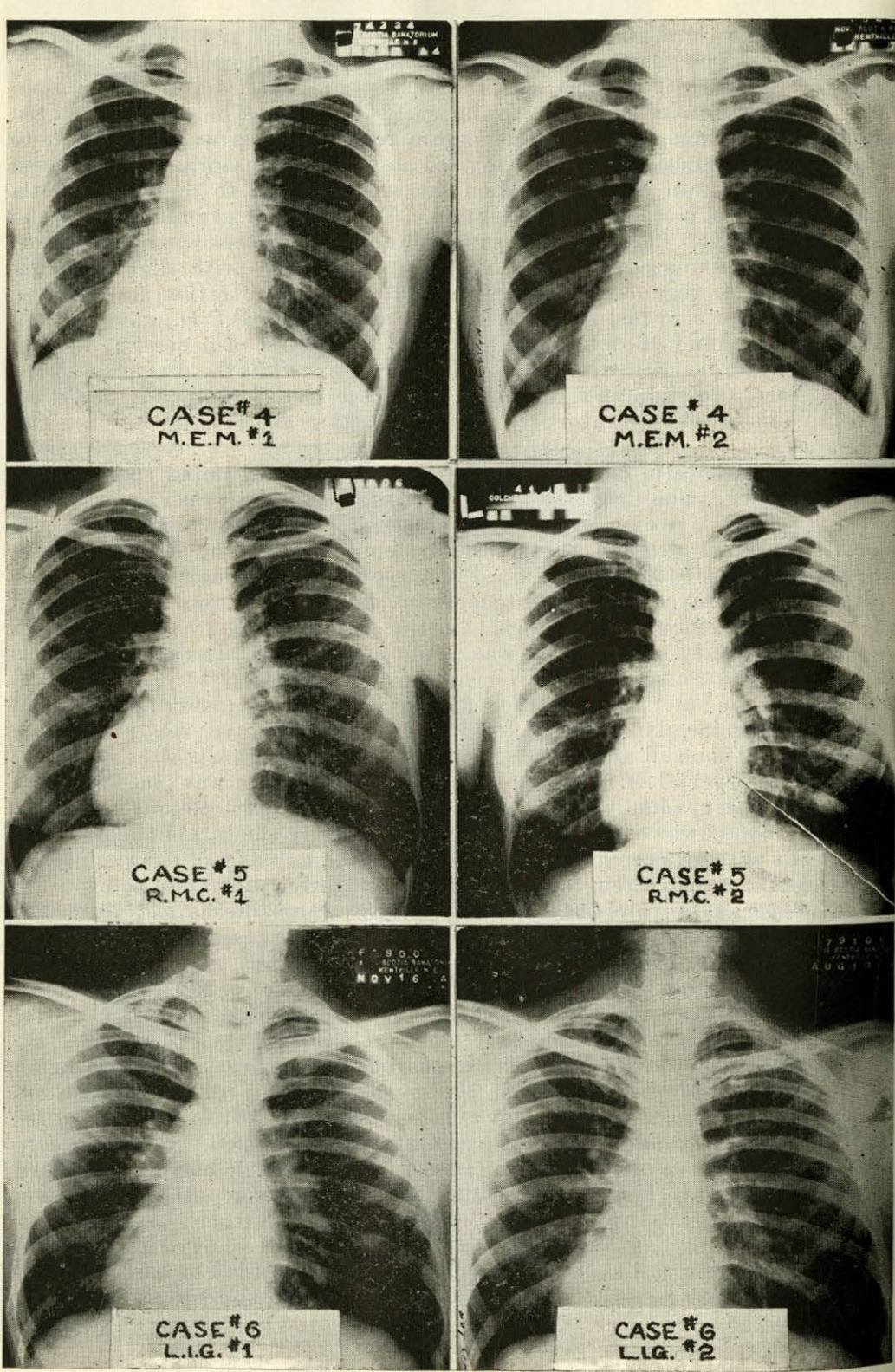

CASE #1
N.E.S. #1
CASE #1
N.E.S. #2
CASE #2
J.B. # 1
CASE # 2
J.B # 2
CASE #3
G.C. # 1
CASE #3
G.C. # 2

was no palpable gland to be found for biopsy. He would not stay for further investigation. The diagnosis entered on his file was sarcoidosis.

(2) J. B., a white female, age 29—This woman's first and only symptom was a non-productive cough appearing early in 1944. The chest presented normal lung findings. The roentgenogram revealed what was considered to be miliary tuberculosis. She was advised to enter a sanatorium but refused to do so until late in November when she was admitted to the Nova Scotia Sanatorium for a period of investigation. The physical examination of the chest was negative. The X-ray picture had not changed, showing throughout both lungs disseminated nodular changes apex to base, with slight enlargement of the hilar regions. Sputum examinations, concentration and culture, were negative for acid-fast bacilli. The tuberculin tests, P.P.D., gave no skin reaction. The albumen-globulin ratio was 1-2. A course of penicillin, 300,000 units, was prescribed but without benefit. Sarcoidosis was the diagnosis established. Since this woman's discharge from the Sanatorium, we find that she complains of no respiratory symptoms and that she is carrying on a full day's work.

(3) G. D., a white female, age 17—In 1942, this girl noted spots on her feet and left leg. She describes them as hard, raised, brownish areas, about the size of a pea. A diagnosis of erythema nodosum was made and she was placed on bed rest although she had no systemic upset. The spots gradually disappeared. In 1943, she developed a non-productive cough and the chest was promptly X-rayed. The roentgenogram showed a bilateral miliary lesion with total involvement of the lungs. On the strength of the X-ray picture, a diagnosis of miliary tuberculosis was made and shortly afterwards she was admitted to the Sanatorium. The physical examination revealed a small raised area in the inner aspect of the left upper arm, enlargement of the cervical and supraclavicular glands, and a few bilateral fine rales over the lungs. The patient did not look ill and both sputum and tuberculin tests were negative. There was no reversal of the albumen-globulin ratio. She was placed on bed rest. Her health gradually improved and she gained sixteen pounds in weight. A tonsillar biopsy was carried out and microscopically small tubercular collections of cells without caseation were reported. The mildness of her symptoms, the progressive gain in strength and weight, the negative tuberculin and sputum tests enabled us to rule out tuberculosis. She was discharged from the Sanatorium as a case of sarcoidosis. Subsequent X-rays of the chest have shown no change in the radiographic findings in the lungs.

(4) M. E. M., a white female, age 35—In the summer of 1942, this woman complained of loss of weight and strength. She was advised to have an X-ray examination and the report came back normal chest findings. In the late fall, she noticed fairly large bluish areas appearing on the legs. She was again referred to the radiologist and his findings reported a diffuse infiltration throughout both lungs. She was given a period of bed rest for three months, when for the first time cough and expectoration developed. Fourteen consecutive examinations of the sputum failed to show tubercle bacilli. Repeated tuberculin tests gave a negative result. After eighteen months observation at home, she was admitted to the Sanatorium for further investigation. The roentgenograms, as compared to the previous ones, showed no essential change in the lungs: a disseminated miliary infiltration apex to base throughout both pulmonary fields. Tuberculin tests were negative. Sputum examina-


CASE # 4
M.E.M. # 1
CASE # 4
M.E.M. # 2
CASE # 5
R.M.C. # 1
CASE # 5
R.M.C. # 2
CASE # 6
L.I.G. # 1
CASE # 6
L.I.G. # 2

tions, concentration and culture, showed no acid-fast bacilli. There was but a slight increase in globulin with no reversal of the albumen-globulin ratio. A tonsil was removed for biopsy which on histological examination showed a simple lymphoid hyperplasia. The patient came up for discharge from the Sanatorium diagnosed not tuberculous, sarcoidosis.

(5) R. M. C., a white female, age 26—This nurse had yearly X-ray examinations of the chest at the hospital from 1941 to 1944, always with negative results. She contracted a cough in January, 1944, accompanied with slight expectoration. She carried on her customary duties until April when she developed what she thought to be a boil on the back of her neck. This cleared up in a few days and with it the chest symptoms subsided. In May, she was treated for catarrhal jaundice. Following her illness, X-ray examination showed some slight infiltrative changes in both lungs. As the pulmonary shadows had increased in character, she was referred to the Sanatorium in August for investigation. The physical findings were apparently negative. The roentgenogram showed a disseminated miliary infiltration from the 2nd rib to the base on both sides with slight enlargement of the hilar shadows. The patch and 2nd strength tuberculin tests were negative. Blood findings were normal, except for a reversal in the albumen-globulin ratio. The patient was discharged from the Sanatorium with a diagnosis of sarcoidosis. Frequent follow-up examinations, including X-ray, have since shown no essential change in the lungs. She appears to be in the best of health and carries on her nursing duties with no effort.

(6) L. I. G., a white male, age 30—This man always enjoyed good health. He was called up for military training in November, 1943, but on account of his radiological findings he was rejected and told to apply for admission to a sanatorium as he suffered from a severe form of tuberculosis. He consulted his family physician and a full investigation was carried out. The significant findings were: generalized enlargement of the lymph glands, a cutaneous lesion and roentgenological changes in the lungs. The glands were of a moderate size, discrete, hard, freely moveable, and non-tender. X-ray of the chest revealed a finely disseminated infiltration in both lungs, most marked in the middle and outer zones, with bilateral hilar enlargement. No sputum was available for examination and the patient did not react to the 2nd strength Mantoux test. The blood findings were normal except for a definite elevation in the total protein with a reversal of the albumen-globulin ratio. Two inguinal glands were removed and on histological examination were found to contain numerous collections of cells very similar to those in miliary tuberculosis but with a consistent absence of caseation allowing a definite diagnosis of sarcoidosis to be made. Following this report, he was allowed to return to work and remained asymptomatic until January, 1945, when he developed dimness of vision. He consulted an oculist and was found to have a typical sarcoid uveitis. Two full courses of penicillin were given at this time without effect but a course of deep X-ray therapy brought about improvement in the eye condition. At our request in August, 1945, he reported to the Sanatorium for examination. At this time, there was noted an advanced papulo-macular cutaneous lesion involving the neck and the chest and to a less extent on the inner aspects of the upper arms. The eruption was neither itchy or painful and the man stated that it had been present for a number of years. The lymph glands were generally enlarged especially in the inguinal and axillary

regions. In these areas they were about the size of a walnut, with a firm consistency, not fixed, and not tender. The eye grounds were not examined. Physical examination of the chest elicited essentially normal signs. The X-ray had shown no change from that of two years ago. This man is at present doing a full day's work on his farm and aside from slight loss of visual acuity feels perfectly well.

Summary

(1) A short review of the subject of sarcoidosis, together with the summaries of six cases of our own is presented.

(2) All the patients in this series are white, four females, and two males.

(3) In all the cases, the prominent lesion was pulmonary. Previous to admission to the Sanatorium four were diagnosed as miliary tuberculosis and two suspected tuberculosis. The X-ray picture in these cases was almost identical showing a disseminated miliary involvement throughout the whole of both lungs. A definite skin lesion was observed in two cases. Two others gave a history of cutaneous involvement which at the time was considered to be erythema nodosum.

(4) The interesting blood finding on four of the cases was the reversal of the albumen-globulin ratio. No eosinophilia was noted.

(5) There is no specific treatment for sarcoidosis. The prognosis in most cases is good depending upon the damage done certain organs especially the lungs, eyes and heart.

(6) In interpretating X-ray films which appear to be miliary tuberculosis, sarcoidosis should always be kept in mind and the patient should not be given a hopeless prognosis until full clinical and laboratory investigations have been carried out.

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Address of the Honourable A. S. MacMillan, Premier of Nova Scotia, on laying the cornerstone of the new Victoria General Hsopital, Halifax, N. S., September 5, 1945.

Your Honour, Sir Joseph, Mr. Chairman, Ladies and Gentlemen:

As Premier of this Province I feel very happy on this beautiful September day.

This magnificent structure rearing itself into the heavens at a greater height than any other building in Nova Scotia will, when completed, be for all a symbol of love, of mercy and of service.

To this new hospital will come tens of thousands of people from all over this province for healing. Here in due course will be provided under the direction of the Honourable Minister of Health, Dr. F. R. Davis, the very best medical and surgical facilities obtainable. Here will be set up clinics where highly qualified specialists in Canada will be available for consultation and direction, obviating the necessity of our people, we hope, going to the United States and elsewhere for such consultation.

This hospital will fill a greatly felt want in Nova Scotia. It is true we have local hospitals in practically every town and in many villages throughout the province. They are all doing a grand work, but the construction of this edifice will mean that difficult cases may be sent here from these local hospitals for observation, and in some cases for the treatment the smaller institutions are unable to provide. A glance at the long waiting lists for admission to our present Victoria General Hospital makes on realize all too well the necessity for this new building and the equipment it will contain.

The erection of this hospital has been under consideration for several years, and would have been completed ere this had we been able to obtain both the necessary authority to build from the Dominion Government and the requisite priorities for materials. Plans and specifications have been in readiness for about three years, and just as soon as we received permission to go ahead, the work was started. The structure is now more than half completed and we hope that before the end of 1946 it will be ready for opening and occupancy.

Prsonally I take great pride in the fact that this magnificent hospital building was started under my administration. It affords me great pleasure to participate in the laying of this cornerstone, which I am marking as my last public act as Premier of the Province of Nova Scotia.

Address delivered by the Honorable F. R. Davis, M.D.,C.M., Minister of Public Health and Welfare, at the laying of the cornerstone of the new Victoria General Hospital, September 5, 1945.

This is a proud day in the history of public health in this province. We are not only witnessing the laying of the cornerstone of a fine new building, but we see here in the steel, the brick and the stone, so skillfully united, the material form of ideas originating in many minds over a considerable period of time.

Hospital buildings, insofar as design and construction go, are not essentially different from other buildings, but hospitals are merely housed in buildings. A hospital must have much more than spacious or correctly designed rooms.

The most beautiful building in all the world could not be a hospital without doctors, nurses and attendants, all working together in perfect harmony and each giving his or her best skill and knowledge in order that the patients may have all known means of regaining health.

A well-designed, well-built and perfectly equipped hospital makes it easier for the doctors, nurses and attendants to do a first-class job but nothing can replace sound knowledge, acquired skill and devotion to the high ideals which characterize the medical and nursing professions.

This building is designed and built to assist the medical profession to better care for their patients in the most modern manner.

For the past number of years the staff of the Victoria General Hospital has been doing very excellent work under the most difficult conditions. I cannot speak too highly of the good spirits and cheerfulness with which this work has been done.

The building of a hospital of this kind, at this time, is a great undertaking. Difficulties in obtaining materials and workmen are great, and I am sure the Minister of Public Works, Mr. McKenzie, and those associated with him, are to be commended for the progress which is being made.

I would like to pay tribute to the work of the late Andrew Cobb, the architect who designed this building. I had a great deal to do with the work at that time, and was very intimately associated with him for a full year during the planning stage. He was not only a great architect, but a great artist. He could see beyond the brick and stone to the great heart and soul of an institution of this kind, and give expression to these things on the drafting board. It is a matter of general regret that he could not live to see the completion of his work.

We cannot impress on ourselves too strongly that the erection of a hospital is not an end in itself. It is but an instrument, to be placed in the hands of those that work in it, to do better work, and unless it adds in the future to the comforts and welfare of the people of the province, it will have failed, regardless of the building itself.

The real formation of this hospital will only begin when the building is completed. It is then that we will need the fullest cooperation of all those connected with it.

We speak to-day of medical science, but medical science to-day is so broad that it embraces all other sciences. Even that last and most spectacular of all achievements, the splitting of the atom, if it can be controlled and regulated might well give us our most effective agent for the treatment of malignant disease.

It can well be understood, then, that medical science has gone beyond the comprehension of any one man. No one doctor to-day can pretend to know of all the measures that science can provide. The day of specialists and group medicine has arrived, and we can best serve the interests of our people by setting up a group of specialists, each doing the things which he can do best to give care for their patients, provide training for medical students, and on whom the general practitioners throughout the province can rely to help him solve their difficulties.

I am particularly interested in the development of the out-patient department, because my experience in medical practice, over a fairly long term, has convinced me, as it has many others, that the best progress can be made, first

and foremost, by the prevention of disease, and later by treating disease in its early stages, before it has become established, and by a greater study of the significance of early symptoms, and it is in the out-patient department that patients appear in this condition. Without going into details, these are our aims.

We thus have before us the unfinished building which, when completed, and by the magic of human personalities, we expect to become a hospital. We have put our best thoughts and efforts into its construction. If it provides modern accommodation for persons suffering from diseases, it will be well worth the cost and if it meets our high expectations and provides our doctors and nurses with the best possible facilities for carrying out their healing missions, this day, and the opening day of this hospital, will long be remembered in the annals of our history.

I am very glad that we have on the platform to-day one who has done a great deal to make this project possible. Had it not been for the enthusiasm of the Premier of this Province, in bringing pressure on those in authority, so that we might have materials, this building might well have been further delayed. It gives me great pleasure, at this time, to call on the Honorable A. S. MacMillan to lay the cornerstone.

The Boy from Lanarkshire

Arthur L. Murphy

THERE were ten children in the Hunter family of lowland Lanarkshire. Seven of them died, a proportion considered normal in early eighteenth century days. A sister lived, and two brothers, William, and John who followed him by ten years and was the youngest of the family.

William Hunter did many great things. He was an anatomist who could see in theory and laboratory finding a practical application, to aid the suffering. He studied embryology, but not as did Harvey and Malpighi. He thought of the little embryo as a human being that must be brought safely into the world. For thirty years he studied the pregnant uterus, wrote a work which has lived on as a classic. He showed that while the embryo was dependent on the mother for sustenance, it had blood and a circulation of its own. He practiced obstetrics and succeeded in doing for England what Louis XIV had done for France. People began to ask for trained obstetricians instead of midwives. Doctors attended more frequently in normal cases, instead of being summoned only before death, to help the midwife bear the onus of the tragedy. William Hunter taught that normal childbirth did not require the surgical measures obstetricians were too fond of using. He showed students his own instruments, rusty with disuse.

For all this, the greatest work William Hunter produced was John, the uncouth, undisciplined, emotional Celt, who was to stand with Paré and Lister alone, amongst surgery's great; John who loved pleasure and irresponsibility, not school or books, who might well have divided his life between the farmyard and taverns of Lanarkshire. He had known but little training. In school he would not study with his classmates; scolded, he bellowed at the rafters till he was given his way. Only when the teacher touched on nature, on the clouds in the sky, on the ants, and bees and birds, did he show any interest. Then he pestered with questions—Why do the leaves turn red in autumn? Why have young frogs tails?—questions nobody could answer, which only brought fresh wrath on his head. Now he was a young man. What was to be done with him? John himself was beginning to worry. He wrote humbly to William; the rustic country brother to the family's pride, the rising London surgeon.

Perhaps William thought of the many London taverns and theatres, tempting spots for a fun seeking Scotsman. But he thought too of the baby brother who quarrelled and asked strange questions and dreamed at the horizon. His work was becoming too heavy; he needed an assistant. So to London, on trial, came John.

He was awed at the fine gentleman who was his kin; filled with wonder at his great collection of anatomical specimens. Shyness was swept away by his curiosity. What was this? How did that come to be? William was not like the teacher in Lanarkshire. William answered, explained, led him on into strange new worlds. John forgot his old loves. Under his brother's guidance the hot, Celtic temper burned with a new light.

William had John appointed as surgeon-apprentice to Chelsea hospital. William found him new teachers. He studied under Percival Potts who had tripped over a London paving and broken his ankle; who had gone to bed and written a classic description of it, and followed that with an article on diseases

of the spine, and that with another and another, till, when he was whole again, he found himself famous. William sent John to Oxford to give him the polish he lacked. Only at this did he rebel. "They wanted to make an old woman of me," he said, and returned with greater ardour to his anatomy and surgery. His work and his name grew, and it came that when men spoke again of Hunter, they meant John.

John Hunter made surgery a science, soundly based on pathology and physiology. Since Ambrose Paré, two hundred years before, there had been no great man in surgery. It was a skilled craft, practical through its very nature. But the surgeon asked no questions; he saw a diseased condition and attempted to remedy it by the most obvious method. A wound he sewed up, with little regard for the apposition of muscles or nerves. If a limb were gangrenous, he cut the dead part off. He did not know whether that which he left would heal or continue dying; not understanding the nature of the gangrene, he could not. An aneurysm he treated by tying the artery above and below, to prevent the sac from bursting. Often infection sprang up in the blood clot or with its blood supply cut off, the part died. Either way, the patient was doomed.

Gangrene came, most often, from diabetes; aneurysms from syphilis. In the eighteenth century they made up a large part of surgery—all the greater because not even the boldest operator dared touch the abdomen, no matter how urgent the need. Infection was almost sure to follow, and death.

Paré had elevated surgery from the hands of the montebanks to a skilled craft. In raising it again, to a science, giving it the same reasoned foundation that was being built under medicine, Hunter followed many of the principles of his great predecessor. He relied on nature to cure. Unhampered, that was her way. Inflammation, he said, was not a disease. It was the reaction of the tissues against their enemy.

The Celtic mind that had lived much of its early life in dream castles would accept nothing without scientific proof. "Did you go yourself and examine this, or how do you know?" asked Socrates. To his students and to himself, Hunter repeated this question.

Studying the circulation of the blood in the deer's antlers, he found that if he cut off the main artery smaller ones developed to take its place. He thought of the arteries of man, and their aneurysms. If, instead of tying the artery above and below the sac, he were to tie it above only—high above—what would happen? Might it not be that some blood from smaller vessels would still flow into the sac, slowly, causing a clot to form gradually, which would prevent its bursting? And might not a new circulation be slowly developed by the smaller arteries? It seemed reasonable. He must try. Thousands of limbs and lives were saved, happy testimonials to the success of his experiments.

Venereal diseases were left to the surgeons to treat. John Hunter studied them closely, but not closely enough to satisfy him. Where could he get a sufferer who would be always beside him, in his laboratory, in his study, at his lectures? The answer was obvious. He infected himself with what he thought to be gonorrhoea. He watched, waited, and fretted as nothing developed after the allotted time. Then appeared the reason in the form of chancre. It was syphilis he had contracted! So much the better. Treatment? There would be no treatment till he had learned what he wished to know.

He observed and made notes—the sore throat, the rash. He should begin his treatment now—but no, in a few more days. Perhaps the little spirochaetes were already within his chest, gnawing at the heart which was to fail him.

He worked on. Behind every surgical condition lies a pathological reason, a malady. He tried to show its nature. Only then could treatment be logically planned, he said. He described surgical shock, the collapse of his patients following major operations. Its treatment was two hundred years away. He studied physiology. The blood, he said, is alive, just as is solid tissue. Some men smiled at this wild idea; others went back to their laboratories and redirected their efforts.

Structure, he said, is the result of function. Here was a whole new concept of anatomy. The foot is made in this way because it is to be walked on, said the old school. Wrong! cried Hunter. The foot is walked on, hence it is made in this way. Quibbling, you think? Not at all. The whole relationship of anatomy and physiology was changed, by this idea. Only in recent decades have scientists begun to appreciate it fully, and to realize that anatomy is made up, not of dead tissues in the dissection room, but of living, working bodies; that form develops from function.

He did extensive work on the teeth and founded modern dentistry.

John Hunter prospered; which was well. His household had grown so great all his resources went to maintain it. He had pathological specimens, more than thirteen thousands, a zoo of animals that included rats and rabbits, tigers and ostriches. Every strange animal he could get, by purchase or, if necessary, bribery, was his. He compared them, observed little differences between this species and that which gave him a fresh clue to the function of a muscle or the development of an organ. He observed that the mammal, in developing, passes through different stages where it resembles, in many respects, the fish, then the reptile. His students followed him from hospital to home; there were animal keepers, laboratory assistants, a group of forty-five in all, who lived in the great house outside London.

The master of the house rose at 6 a.m. He dissected in his laboratory till 9. He saw his patients. This occupied him till noon when he began his hospital rounds. Back home at 4 p.m., he dined and slept for an hour. His lectures came next. Home again, he dictated his day's observations to a secretary. He retired to his room at midnight—to spend an hour, or two, or more, in study.

William Hunter was of his past now. His day left little time for social amenities, even with a faithful brother. He struggled on, crushing with the power of the Celtic temper all who disagreed with him. He had proved this; how dare they set their little theories against it? William, too, worked on, with fame dimmed only by his brother's. William had discovered this? John thought not. John knew he had not! This was John's discovery. The terrible temper was turned against his brother. William, with the same blood in his veins fought back. The Hunters were enemies.

Three years later, William Hunter was dead. William the aesthetic, of the thin, delicate hands, and fine, drawn features; William who lived in parsimony, but gave half a million pounds to his Glasgow University for a museum. Stephen Paget said of him: "He never married; he had no country house; he looks in his portraits a fastidious, fine gentleman, but he worked till he dropped and lectured when he was dying."

John wept bitter tears. But though he has mastered almost his every thought in rigid training, his temper was beyond him. The heart which bore willingly the physical demands he put on it, could not stand the emotional. "My life is in the hands of any rascal who chooses to annoy and tease me," he confessed. One day a heated discussion arose in the clinic room, and John Hunter was led out to die.

And what of the sister, third survivor of this remarkable family? She married a doctor and a knight who, when John Hunter died, tried to destroy the great surgeon's manuscripts and claim for his own glory as much of them as his poor brain could comprehend.

History was to pay kinder tribute to John Hunter, the man who came down from Lanarkshire to London and his brother William in London.

New Feature at the Annual Meeting

At the last meeting of the executive it was decided that this year we offer the opportunity to the pharmaceutical firms of Canada to display their products at our annual meeting. This has been done. The ballroom of the "Cornwallis Inn" will be set aside for advertising booths. The following firms are this year putting on a display:

Abbott Laboratories Limited
Anglo Canadian Drug Company Limited
Ayerst, McKenna & Harrison, Limited
Carnation Company, Limited
Ciba Company, Limited
Charles E, Frosst & Company
The J. F. Hartz Company, Limited
Laboratory Poulenc Freres of Canada, Limited
Lederle Laboratories, Inc.
Eli Lilly & Company (Canada) Limited
Mead Johnson & Company of Canada, Limited
Nestle's Milk Products (Canada) Limited
E. R, Squibb & Sons of Canada, Limited
Victor X-ray Corporation of Canada, Limited
Winthrop Chemical Company, Inc.
John Wyeth & Brother (Canada) Limited

NINETY-SECOND ANNUAL MEETING OF THE MEDICAL SOCIETY OF NOVA COTIA
CORNWALLIS INN, KENTVILLE, N. S.
OCTOBER 10, 11 AND 12, 1945

PROGRAMME

TUESDAY, OCTOBER 9th

2.30 p.m. Executive Meeting.

WEDNESDAY, OCTOBER 10th

9.00 a.m. Registration.
9.30 a.m. First Business Session.
11.30 a.m. "Consideration of Two Cases of Amenorrhoea" (lantern slides), by Dr. Leon Gerin-Lajoie, Montreal.
12.30 p.m. Adjournment.
2.30 p.m. "The Relation of Pregnancy with the Onset of Certain Neurological Syndromes," by Dr. C. A. Gauthier, Quebec.
Discussion to be opened by Dr. J. W. Reid, Halifax, N. S.
3.30 p.m. Discussion on Health Insurance, opened by Dr. Leon Gerin-Lajoie, President, C.M.A., Dr. A. E. Archer, Chairman of Council, C.M.A., and Dr. T. C. Routley, General Secretary, C.M.A.
5.30 p.m. Adjournment.

THURSDAY, OCTOBER 11th

9.30 a.m. "Peripheral Circulatory Disorders, Diagnosis and Treatment," by Dr. Gavin Miller, Montreal.
Discussion to be opened by Dr. L. M. Morton, Yarmouth, N. S.
10.30 a.m. "The Remote Effects of Anti-convulsive Therapy with Diphenyl Hydantoinate of Sodium," by Dr. C. A. Gauthier, Quebec.
Discussion to be opened by Dr. W. Leslie, Consulting Psychiatrist, Camp Hill Hospital, Halifax, N. S.
11.30 a.m. "Treatment of Metastases from Carcinoma of the Breast," by Dr. Carlton B. Pierce Montreal.
Discussion to be opened by Dr. S. R. Johnston, Halifax, N. S.
12.30 p.m. Adjournment.
2.00 p.m. "Typhoid Fever Outbreak in Trenton, N. S.," by Dr. G. Graham Simms, D.P.H., Divisional Medical Health Officer, Pictou, N. S.
3.30 p.m. "Review of Ano-Rectal Conditions," by Dr. Gavin Miller, Montreal.
Discussion to be opened by Dr. Eric W. Macdonald, Glace Bay N. S.
4.30 p.m. Second Business Session.
5.30 p.m. Adjournment.
6.30 p.m. Reception.
7.30 p.m. Annual Dinner (Informal).
Presidential Address.

FRIDAY, OCTOBER 12th

9.30 a.m. "The Psychiatric Patient—Problems of Management," by Dr. R. O. Jones, Halifax, and Dr. R. W. M, MacKay, Dartmouth.
10.30 a.m. "A Year with Field Medical Units in the Middle East," by Lieutenant-Colonel J. A, Noble, R.C.A.M.C.
11.30 a.m. "A Neurological Examination," by Lieutenant-Colonel T. M. Sieniewicz, R.C.A.M.C.

Abstracts from Current Literature

PRESENT STATUS OF CHRONIC REGIONAL OR CICATRIZING ENTERITIS. Bockus, H. L.: Jour. Am. Med. Assoc., 1944, 127: 449.

It is apparent that with the use of all known methods of therapy chronic regional enteritis is not frequently overcome. The prognosis in any given instance must always remain in doubt, not for one or two years, but for many years. Not infrequently recurrences take place following resection in spite of the removal of every visible evidence of the lesion. It is probable that, with longer and more adequate follow-up studies, one may not anticipate permanent good results in more than 50 per cent of patients treated by resection of the lesion. However, there is some indication that regression of the disease may follow conservative medical management or short-circuiting operation with exclusion. Certainly clinical remissions do occur, and some patients with extensive involvement of many feet of the small intestine enjoy good health for rather long periods of time. For this reason one should maintain an optimistic point of view concerning the outcome and possibility of improvement in every patient. Even though operation is deemed impossible, adequate medical management should be continued indefinitely, as clinical improvement in some patients may be nothing less than remarkable, following a relatively short period of hospitalization and thoroughly adequate management.

THE MALE CLIMACTERIC, ITS SYMPTOMATOLOGY, DIAGNOSIS AND TREATMENT. Heller, Carl G. and Myers, Gordon B.: Jour. Am. Med. Assoc., 1944, 126: 472.

The diagnosis of the male climacteric was established in 23 cases by the finding of pronounced elevation in gonadotropic hormone excretion, comparable quantitatively to that occurring in castrates. This was corroborated in all 8 cases subjected to biopsy by histologic evidence of testicular atrophy and degeneration. The diagnosis was further supported in all 20 cases treated with androgens.

A clear cut differentiation of the male climacteric from psychogenic impotence was made by urine gonadotropic assays, which were decidedly elevated in the former group and normal in the latter. A simple therapeutic test is helpful in distinguishing between these two conditions.

The symptomatology of the male climacteric is different from that of psychoneurosis and psychogenic impotence. Satisfactory therapeutic result were obtained by intramuscular injections of testosterone propionate and by implantation of testosterone pellets but not by the oral or sublingual administration of methyl testosterone.

Although the male climacteric may occur as early as the third decade, it is a relatively rare syndrome, probably affecting only a small proportion of men who live into old age.

RECURRENCE RATES IN RHEUMATIC FEVER. Wilson, May G. and Lubschez, Rose: Jour. Am. Med. Assoc., 1944, 126: 477.

The average over all risk for a major recurrence of rheumatic fever is 25.0 per cent for patients between the ages of 4 and 13 years, 8.6 per cent for patients between the ages of 14 and 16 years and 3.7 per cent for patients between the ages of 17 and 25 years. The average over all risk for children from 4 to 16 years of age is 20.6 per cent for a major recurrent attack.

The over all risk for a major recurrence of rheumatic fever is two to three times greater in any year following an attack than the risk following one or two or more years of freedom from activity, i.e. 20.6 per cent, 10.7 per cent and 6.6 per cent respectively.

The risk for the year immediately following an attack is 38.7 per cent in comparison to 11.2 per cent in the year immediately following one year of freedom from a recurrence.

The recurrent rate is not significantly different for patients experiencing one, two or three recurrent attacks, i.e. 22.3 per cent, 18.6 per cent and 22.1 per cent respectively.

The recurrent rate is not significantly different in patients experiencing arthritis and chorea, with or without active carditis. The severity of the disease did not appear to influence the risk of recurrence.

The rate of recurrence in twelve consecutive calendar years, from 1924 to 1935 was not significantly different when sampling factors were not operative.

The risk of recurrence is not significantly different among children living under relatively favourable and unfavourable environmental conditions.

The only factors which were found to influence the risk of future recurrences were age and the interval of time elapsing since the last attack. Most published studies on the relative frequency of rheumatic fever in experimental and control groups do not appear to meet the basic requirements for adequate biostatistical analysis. Final judgment as to the validity of etiologic concepts and consequent preventive therapy, which are based on these studies, must be deferred.

THE DIAGNOSIS OF RHEUMATIC FEVER. Jones, T. Duckett: Jour. Am. Med. Assoc., 1944, 126: 481.

The author thinks it would seem logical to make a positive diagnosis on rather strict criteria. Until the etiology of rheumatic fever is known or there is a specific diagnostic test, some confusion is inevitable. We may develop more intelligent criteria with careful clinical observations. For instance, the recent syndrome described by Kaiser may prove to be rheumatic fever, though he has rightly warned against such definite acceptance as yet. The development of rheumatic heart disease by any appreciable percentage of members of the armed services having mild, and even transient, suggestive rheumatic fever symptoms, may lead to the more liberal interpretation of possible rheumatic fever symptoms.

The problem of a hereditary susceptibility is also of importance. The high familial incidence of rheumatic fever and susceptibility on the basis of history may and should weigh heavily the interpretation of suggestive manifestations. One hesitates as yet to use this aid for general diagnostic purposes. Recently DeLiee, Dodge and McEwen, using polyarthritis as the common clinical feature in comparing children and adult groups, found that residual rheumatic heart disease at the time of hospital discharge was much lower in adults than in children. The elimination of all save one major manifestation as the basis of selection of cases for analysis may lead to false conclusions. It is difficult to evaluate such a varied clinical syndrome as rheumatic fever on the basis of a single sign or symptom. While many observers feel that heart disease is less common in adults with rheumatic fever than in children, it has been the author's experience that rheumatic heart disease is common to the two groups and without great discrepancy as to incidence.

There has been a strong tendency to consider a satisfactory response to salicylate as a diagnostic aid. The recent revival of interest in salicylate therapy with massive dosages renews this possibility. One may state that the clinical course of various diseases may be altered to some degree by salicylates. Until additional evidence is forthcoming the amelioration of signs and symptoms by salicylates in questionable cases would not seem advisable to consider as more than suggestive evidence of a diagnosis of rheumatic fever. The evaluation of the effectiveness of salicylate therapy may be rendered impossible unless strict criteria are used in the selection of patients for such study. In the author's experience it has been impossible to differentiate any pre-rheumatic state.

For the present, it would seem advisable to limit the diagnosis of rheumatic fever to patients with rather distinct clinical manifestations. It is suggested that the following constitute reasonably certain diagnostic criteria: (1) Any combination of the major manifestations (carditis, arthralgia, chorea, nodules and a verified history of previous rheumatic fever). (2) The combination of at least one of the major manifestations with two of the minor manifestations (fever, abdominal or precordial pain, erythema marginatum, epistaxis pulmonary changes and laboratory abnormalities). (3) The presence of rheumatic heart disease increases the diagnostic significance of the minor manifestations, when no other cause for these manifestations exists.

Small though probably insignificant errors may be found with these criteria. Numerous clinical entities as enumerated may be confused with rheumatic fever. Clinical observations and, wherever possible, specific diagnostic tests should be applied in any diagnostic problem.

Regional Ileitis. Editorial: Jour. Am. Med. Assoc., 1944, 126: 499.

Regional ileitis has been receiving more attention ever since Crohn and his associates first described it in 1932. In a recent system of gastroetenrology by Bockus, the whole chapter is brought up to date; aside from correlated statistical data, comparatively little has been added to the original description of the disease.

Pathologists agree that the distinguishing features are: 1. Hypertrophy and thickening of the bowel wall, usually confined to some one localized stretch of the mesenteric small intestine, most frequently the terminal ileum, and varying in extent from a few inches to several feet. A bizarre feature of the

disease is its occasional tendency to attack more than one segment of the bowel, leaving the intervening segments intact. The process may involve the colon down to the sigmoid. 2. Resultant narrowing of the bowel lumen. 3. Hyperplasia of the mucosa, frequently with ulceration. 4. Perforation with localized or general peritoneal involvement and the establishment of internal or external fistulas. The train of events is usually preceded by hyperplasia of lymphatic tissue and an obstructive lymphedema. Microscopically the appearance is highly mimetic of tuberculosis; but all attempts to demonstrate tubercle bacilli or any other causative organism, including the virus of lymphogranuloma venereum, have failed. The counterpart of the disease has not been observed in animals.

The diagnosis rests on symptoms so complex and varied as to create an almost invariable hazard. Crohn's original classification of symptoms is valid to-day, and we shall always be on safer ground if we bear in mind that the course of the disease may follow any of four patterns: (1) that of acute intra-abdominal disease, resembling most frequently acute appendicitis; (2) that of ileocolitic diarrheal disease; (3) that of chronic intestinal obstruction with supervening acute obstruction; (4) that of fistulous (external or internal) formation. Differential diagnosis demands consideration of acute appendicitis, bacillary dysentery, acute perforative peritonitis, intestinal obstruction and cancer of the bowel.

Treatment is usually surgical. If the patient is seen in the acute stage and the abdomen is mistakenly opened for appendicitis, the consensus seems to be that the time-old maxim of "let a sleeping dog lie" should be followed and the abdomen closed without drainage. In the chronic cases the methods of treatment are either resection of the diseased segment of bowel or of side-tracking it (by ileocolostomy or by some similar procedure). Search should always be made for so-called skip areas of bowel, distant from the region under immediate surgical attack; but even if these are found and cared for adequately there are, unfortunately, an appreciable number of post-operative recurrences. Since the etiology is not known, methods of prevention are not available. In those cases in which it may be suitable to apply purely medical treatment, this should follow, in general, the lines established for the treatment of ileocolitis.

THE USE OF PENICILLIN IN RHEUMATIC FEVER. Watson, Robert F., Rothbard, S. and Swift, H. F.: Jour. Am. Med. Assoc., 1944, 126: 274.

Eight young men with rheumatic fever have been treated for a two week period during the acute phase of their disease with penicillin. The total dose of penicillin varied from 1,975,000 to 3,470,000 Oxford units, and 7 of the 8 patients received over 3,000,000 units. The routes of administration were varied. Six of the eight patients received the drug by the intramuscular and intravenous routes intermittently. The remaining two were given penicillin by constant drip for one week and then by the intermittent intravenous method for the second week.

All the patients were acutely ill with elevated temperatures and acute polyarthritis and, in addition, two of them had pericarditis and one developed pulmonary edema the day after admission. There was no evidence that penicillin altered the course of the disease in seven of the eight patients. It was difficult to evaluate the effect of this drug in the remaining patient. On

the second day of penicillin treatment he was started on 9 Gm. of salicylates daily with the object of rendering him afebrile and asymptomatic and then of withdrawing this drug while he was receiving continuous penicillin therapy. The patient made a prompt symptomatic response to salicylates but on withdrawal of this drug the signs and symptoms of rheumatic activity failed to recur; his erythrocyte sedimentation rate dropped to normal and he made an uneventful recovery.

It is now generally conceded that infection with group A hemolytic streptococci usually precedes and probably initiates the attack of rheumatic fever. It moreover appears possible that the hemolytic streptococcus is the only infectious agent involved in the etiology of the disease and that persistence of these micro-organisms in the patient's tissues may be responsible for the continued signs and symptoms of rheumatic activity. It was therefore desirable to know whether the dose of penicillin used was adequate to maintain in the patient's blood a drug concentration greater than that required to inhibit the growth of the patient's own strain of streptococcus.

On admission to the hospital group A hemolytic streptococci were isolated on culture from the naso-pharynx of six of the eight patients. It was shown that 0.015 Oxford unit completely inhibited the growth of all six of these strains when this amount of penicillin was added to a culture containing from 1,000 to 5,000 bacterial cells. It was also shown that the concentration of penicillin maintained in the patient's blood during most of the period of treatment was many times that required to inhibit the growth of the streptococci isolated from these patients. Another indication that the dose of penicillin was adequate, is that the group A hemolytic streptococci were eliminated permanently from the nasopharyngeal mucous membrane of these patients within a short time after beginning treatment.

Whether or not penicillin would be effective in preventing rheumatic fever if given during phase 1 or 11 cannot be answered as yet; but we do know that the sulfonamides are ineffective in this respect even when given at the onset of phase 1. Until the foregoing question can be answered, it seems that the chief value of the antibacterial drugs to-day with respect to rheumatic fever is in the prevention of the streptococcic infection which appears to induce the disease. It would thus seem that, once the preliminary streptococcic infection has started the mechanism leading to the onset of the rheumatic process in susceptible persons, the antibacterial agents now available do not materially alter the evolution of that mechanism. It must be admitted that we have no conclusive evidence that deep seated foci of streptococci may not exist in these patients in spite of their receiving large enough doses of penicillin to remove them from the accessible mucous membranes; for persistence of these micro-organisms could theoretically be responsible for the continued rheumatic activity.

Penicillin in doses ranging from 1,975,000 to 3,470,000 Oxford units given over a two week period to eight young adults with acute rheumatic fever apparently failed to alter the course of their disease.

E. David Sherman, M.D.
Abstract Editor

Society Meetings

Valley Medical Society

THE 38th Annual Meeting of the Valley Medical Society was held at the Town Hall, Middleton, on Wednesday, June 30, 1945, at 3.00 p.m.

Dr. C. F. Messenger presided. Present were: Doctors H. G. Grant, L. B. W. Braine, I. R. Sutherland, E. L. Eagles, J. V. Graham, P. S. Cochrane, W. H. Eagar, F. E. Rice, A. F. Weir, S/L Grant, R.C.A.F., Greenwood, F. R. Shankel, G. W. Turner, R. A. Young, F. G. Mack, J. W. Merritt, R. A. Moreash, L. R. Morse, L. E. Cogswell, O. R. Stone, Colonel Mace, Windsor Military Hospital, Captain Cole, Windsor Military Hospital and Captain Fulton, Windsor Military Hospital.

There was some discussion as to whether we should be host to The Medical Society of Nova Scotia when they meet in Kentville. It was moved by Doctor Eagar and seconded by Doctor Shankel that we extend an invitation to The Medical Society of Nova Scotia to meet in Kentville and that the Valley Medical Society will be glad to act as host.

Doctors L. R. Morse, Braine and Cochrane were appointed as a nominating committee to bring in a slate of officers for next year. The selection of this committee was as follows:

President—Dr. A. B. Campbell, Bear River.

Vice-Presidents—Dr. J. P. McGrath, Kentville; Dr. L. R. Morse, Lawrencetown; Dr. W. R. Dickie, Digby.

Secretary-Treasurer—Dr. R. A. Moreash, Berwick.

Representatives to the executive of The Medical Society of Nova Scotia—Dr. R. A. Moreash, Berwick and Dr. O. R. Stone, Bridgetown.

The following scientific programme was presented—

1. Dr. J. W. Merritt, "Management of Acute Head Injuries."
2. Dr. W. H. Eagar, "Diverticulitis."
3. Dr. J. V. Graham, "Technique—Nailing Fractured Hips."
4. Dr. F. G. Mack, "Transurethral Prostatic Resection."

The meeting expressed itself as being very grateful to those who contributed to the programme.

Dinner was served at the "American House."

R. A. MORASH, Secretary-Treasurer

Personal Interest Notes

STUDIES in child nutrition during the period of rapid growth from one to five years of age will be conducted under the supervision of Doctor E. G. Young, head of the Department of Biochemistry of Dalhousie University at Halifax.

The study is made possible by a grant in aid provided by the Swift Canadian Company, Limited, and is one of several fellowships in nutrition awarded by the Company. Miss Ada MacLeod, a graduate of Acadia University with a Bachelor of Science Degree in home economics has been selected by Dalhousie University to receive the fellowship.

The marriage took place at Dartmouth on August 25th of Miss Norma Jean Prentice, youngest daughter of Mrs. J. Harry Prentice and the late Flight Lieutenant Prentice, of Dartmouth, to Doctor Carmen Norman MacIntosh, son of Mr. and Mrs. J. J. MacIntosh, also of Dartmouth. After a trip through the Maritime Provinces Dr. and Mrs. MacIntosh will reside in Dartmouth. Dr. MacIntosh graduated in medicine from Dalhousie in May of this year.

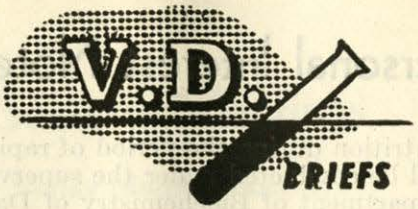
Marking the fourth successive year he has won the Senior Maritime Golf crown, and the third occasion he has successfully defended the title which fell to his golfing skill in as many years, Doctor L. M. Morton, well known Yarmoutb medico and Yarmouth Golf and Country Cluh member, took the 1945 tournament at Kentville in a finish that was a real triumph, during the last week in August.

The marriage took place at North Sydney on September 8th of Miss Ann Frances Meech, e'dest daughter of Doctor and Mrs. Lloyd R. Meech and Doctor Kenneth Joseph Chisholm MacKinnon, R.C.A.M.C., son of Doctor and Mrs. W. F. MacKinnon of Antigonish. The bride graduated from Mt. St. Vincent and Toronto University and the groom graduated from Dalhousie Medical School in May of this year.

Lieutenant-Colonel and Mrs. J. A. Noble and their two sons, Wolfville, have now returned to Halifax to live and have purchased Mrs. Jean Sinclair's residence, 77 Inglis Street.

The marriage took place in St, Barnabas Chapel, Jeffrey Hale Hospital, Quebec, on August 18th of Miss Hilda Marjorie MacNeill, R.N., daughter of Mrs. Jean MacNeill, R.N., of Sydney and Doctor Wilfred Irving Bent, son of Doctor and Mrs. F. F. Bent of Oxford. Doctor Bent graduated from Dalhousie Medical School in 1936.

The BULLETIN welcomes home from overseas the following Nova Scotian doctors: Major H. E. H, Taylor, Antigonish; Flight Lieutenant J. G. MacLean, Glace Bay; Major C. R. Trask Yarmouth; Major C. M, Bethune, Baddeck and Major L. G. Holland, Halifax.



Standard 18-Month Treatment of Syphilis

The standard treatment of early acquired syphilis consists of *at least forty* injections of a trivalent arsenical and *at least forty* injections of a bismuth preparation, given over a period of eighteen months.

The *most important* requirement of this treatment is that it be *continuous*. The patient must receive at least one injection every week. He should never be allowed to go more than ten days without treatment, especially during the first six months.

Epidemiology

Every case of venereal disease has acquired his or her infection from another case. Moreover, every case may have transmitted his or her infection to others before coming to the physician for treatment. The patient is the only person who has information about these contacts to his or her infection. It is the responsibility of the physician to tactfully obtain this information so that it may be transmitted to the provincial health department for confidential epidemiological investigation.

Treatment of Non-Specific Urethritis in the Male

Experience shows that the majority of cases of urethritis in men are caused by the gonococcus, even though this organism cannot be readily demonstrated at the first examination of the patient. Therefore, every man presenting himself with an urethral discharge should have immediate treatment for gonorrhoea in order to protect the patient himself from the danger of possible complications of this disease and to protect the public from a potential source from which gonorrhoea might spread to other persons in the community.