Puerperal Infections*

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IT is not the purpose of this lecture, to dwell upon the subject of puerperal infection from the text book point of view, but rather to stress the discoveries of the last few years.

Firstly, there are two major concepts of bacteriology which will well repay a clear exposition. These new concepts are clinical, drawn from clinical study and not from the laboratory.

Microbes are much like humans, differing chiefly in that they are unicellular and not multicellular, but reacting to heredity, to food and environment much as humans do. Heredity, climate and food determine physical characters in humans and are no less important factors in microbic life. The truth of this is perhaps best illustrated by reviewing the work of Calmet. He took the tubercle bacillus and by growing it in an unfavorable environment and medium, (composed chiefly of bile, to which the tubercle bacillus does not respond with gusto) produced, after many generations, a growth of tubercle bacilli of great attenuation—in fact they were no longer lethal. These could be injected alive into children and newborn infants to immunize the recipient. Hundreds of thousands have been done without producing a single case of clinical tuberculosis. And yet, should one of these infants die of some intercurrent disease, it is found at autopsy that these attenuated tubercle bacilli had the power of producing typical small tubercles in the tissues of the child. These tubercles never break down, and are merely an expression of a low grade irritation by the attenuated tubercle bacillus in their midst. The pearl in the oyster, as it were.

Now, the point is that microbes attenuated through many generations of unfavorable soil remain attenuated for a very long time, and it requires many transfers from favorable to more favorable soil to restore virulence, as sometimes happens in epidemics. Transfer of these attenuated microbes into a single favorable soil, is quite insufficient to restore their virulence except in a very slight degree, because immunity develops at the same time and inhibits the return of virulence, but transference to several new favorable soils without natural immunity heightens the virulence with each transfer.

This concept touches clinical medicine at a thousand points, and especially is it of importance to obstetrics. It can also be stated as

*A Post-Graduate C. M. A. Lecture delivered to Branches of the Medical Society of Nova Scotia in October, 1929.

a corollary—not without exceptions, that the attenuation of an organism heightens its tenacity in tissues.

Expressed in a few words—the foregoing means,—Chronic disease begets chronic disease and acute infections beget acute infections, and chronic infections are the product of attenuated microbes.

Now, the organisms which a woman harbours about herself at all times are attenuated and she is partially immuned to them and they beget chronic or subacute infections only, but new strains from sources other than her immediate environment are frequently productive of very violent infections.

It follows, therefore, that obstetrical technique may suffer many breaks during delivery in the home without disastrous results (unless the surgeon introduces a virulent strain by his surgical contacts in practice. But hospital technique cannot be allowed to suffer any breach of technique, because the patient is in a new, strange and dangerous microbic environment. Autogenous infections, therefore, are generally mild infections. Heterogenous infections are more likely to be very severe ones.

The second clinical bacteriological concept is as follows:—Organisms that have grown upon a certain type of tissue have a strong predilection for that same type of tissue whenever metastases occur. This choice of soil and of food is very striking if closely studied. The selective influence of microbes is something which is just beginning to be understood. It is a protoplasmic attribute, and is the basis of specificity in disease. It is a clinical concept. Bacteriologists have been content, in the past, to give us morphological classification of the microbes, but this gives no information whatever as to their properties of pathogenicity. Even one of the latest developments of bacteriological study, namely, haemolysing properties of microbes, has been proven to be one of no value whatever in judging pathogenicity. Microbes that haemolyse blood can be innocuous to the human body; others that are non-haemolysing are frequently most dangerous bandits.

Armed with these two clinical concepts we may approach the subject of infection—cervical and puerperal, with much greater hope of ultimately winning through to a better understanding of disease processes, and still greater hope of opposing their progress.

Puerperal infections are divided into four great clinical groups, by their pathology or mode of spread

They are—1. Local infections.
2. Those that spread by the lymphatics.
3. Those that spread by the blood vessels— thrombophlebitis.
4. Those that spread by continuity of surface.

It is essential that one should understand these groups thoroughly to be able to treat puerperal infection rationally.

Let us take them in the above order:

Local Infections.

By *Local Infections* one means attenuated or semi-attenuated microbic invasions in which the infection remains local. In the more attenuated or chronic types (chronicity considered not from the point of view of duration, but interchangeable with attenuity) the infection produces no appreciable systemic effects. In the less attenuated there will be recognizable systemic effects such as fever and pulse rate increase, and other signs of systemic absorption such as loss of appetite, neuralgias, anaemia due to haemolysis, etc. In the more severe types of local infection, time is a factor of the utmost imporance for the body to throw up a reactionary zone of defence. In the more attenuated infections the systemic effects may not be at all detectable or, in other cases, only with experience and observation. These mild types are, by great odds, the most common types of infection during the puerperium. One may perhaps appreciate rightly their frequency, when it is stated that 80 per cent. of puerperal infections are symptom-free—in other words, that 80 per cent. of puerperal infections present no symptoms. The most of these cases, but not all, will present signs of temperature and of increased pulse rate, (objective signs) but a percentage of cases are both symptom-free and sign-free (as indicated on a chart) either throughout the illness or until later developments occur.

My objective is, that a case in the puerperal state, to be normal should be infection-free—and that means, a symptom-free and sign-free puerperium and absence of remote troublesome sequelae.

Local infections may invade any surface which has suffered a solution of continuity—This may be the endometrium, cervical, vaginal or perineal tear.

We know that an infection remains local or spreads, depending upon its virulence and upon the lowered resistance of the tissues that are invaded. Men of experience in obstetrics know that a prophylactic episiotomy heals kindly when the second stage of labor is short but, on the other hand, when the vitality of the tissues is lowered by prolonged pressure symptoms in the second stage, the traumatized tissues do not heal so kindly. Now, if we follow our cases after their departure from the hospital, at the sixth week, we find that eighty per cent. of post-partum cases suffer from a chronic endocervicitis. This is the precurser if neglected, of delayed involution of the uterus, prolonged lochial discharge, leucorrhea and later, chronic subinvolution, chronic cervicitis, ectropion, cervical polypi and cancer.

If we follow our cases closely, in the wards, we find that, at times, twenty per cent. of the post-partum cases run a low fever throughout the puerperium; that thirty to forty per cent. show a low grade fever for more than three consecutive days. By many men this is looked upon as physiological, as is the case after an abdominal section. But such is not the case. The puerperal state ought to be temperature free. If any argument were necessary to prove this statement, one

has but to mention the other eighty per cent. of cases, taken promiscuously, that do not show any temperature. On the contrary mild infections are more common in the puerperium of multipara, than of primiparae. This is not as one should expect. But there is an explanation, and it is found in the easy accessibility of the multiparous genital canal to microbic invasions and the frequency of chronic endocervicitis dating from a previous pregnancy and relighting, owing to the traumation of labor. After a woman is delivered she generally lies supine in her bed—when so placed her vagina is at an angle of about thirty-five per cent. with the plane of her bed. She drains up-hill. The vagina being in the form of an inverted funnel, lies with its large vault filled with lochia that is unable to drain away. After forty-eight hours this lochia contains quite a flora, and the delicate cervical mucosa, traumatized and torn, devitalized and, at times, necrotic from pressure, lies bathed in this infected fluid. The result is that eighty per cent. of parturients had a residual chronic infection of the cervical mucosa. Does not this infected cervix produce symptoms during the first week of the puerperal state? In the vast majority of cases the answer is, decidedly, NO! and the reasons are not hard to find. First of all, most of these cases are autogenous infections and, therefore, attenuated. They give rise to a low grade fever and, possibly, a slight pulse elevation, and nearly always a delay in the normal involution. But symptoms are conspicuous by their absence, because a very widespread and severe infection of the cervix, or vaginal or broad ligament can occur without producing pain.

There are only two structures in the pelvis that are supplied with sensory nerves—these are the peritoneum and the perineum (all structures outside the hymen). Between these two surfaces—the peritoneum and the perineum—lies the *pelvic silent area*. Infections in this area, unless they invade the perineum or peritoneum, do not give rise to pain. It will be pointed out later that most of the cases of thrombophlebitis of the uterine veins are silent infections until remote complications arise. Clinicians know that they can transfix and cauterize the cervix without causing any pain. The same applies to the vagina. I have removed portions of those vaginal cysts in the last year without local or general anesthesia, and without pain.

Therefore, local infections, if they do not involve the peritoneum or perineum, are apt to be overlooked because they do not produce *immediate* symptoms. But these infections are followed by serious sequelae, which are all the more frequent owing to their insidious nature. The acute stages slowly and imperceptibly pass into the subacute and chronic stages and remain active over years until serious consequences arise, in the nature of Ectropion, (erosions so-called) polypi, or carcinoma. Slight fever with increased pulse rate and a delayed involution are the only *signs* during the first two weeks; later, prolonged lochial discharge and copious (though not always) leucorrhea.

The more severe infections of a pyogenic nature frequently break down and then heal by granulation. These pyogenic infections are usually shortlived, and heal spontaneously and completely, but the more attenuated infections are characterized by their tenacity, by producing hypertrophy and hyper-function of the glands. A duty is imposed upon us as obstetricians, to recognize these cervical lesions early in the puerperium, and to adopt, in the first days of the puerperium, posturing of the patients, later cleanliness and heat, such as low-pressure cleansing, hot vaginal douches after the sixth day, and local heat to the pelvis by means of the electric baker or diathermia, and by building up the general resistance of the patient and, later, at the fourth or sixth week, mild cautery of the cervical canal.

This form of treatment will prove both preventive and curative, and will promote the retarded involution of both the uterus and its supporting structures and prevent many distressing remote sequelae.

Extension by the Lymphatics.

Usually lymphatic extensions of inflammatory processes are an expression of a more virulent infection. The site of entry may be any genital abrasion or tear. The infection invades the lymphatic system beneath the point of entry and usually extends along the chains of lymphatics, as ordinarily taught. Most of these genital lymphatics, in which we are interested, converge towards one or other broad ligament and from there extend up the sacral and lumbar system.

The infection is like an invading army—its progress may be arrested at any point along its route. The arrest may be permanent or it may be temporary, under which circumstances it breaks through the defences and advances still further, probably to be again arrested permanently or otherwise. If eventually the microbes, in large numbers, reach the blood stream, where the lymphatics and blood vessels meet, we have a septicaemia or bacteriaemia.

It has been demonstrated of late that the offending microbe, in almost one hundred percent of lymphatic extensions, is the streptococcus anaerobicus, and the reason why it had not been more frequently demonstrated by culture was because anaerobic cultures had not been made. Now, the popular and erroneous concept is that streptococcic infections are always virulent infections.—This is most fallacious. The streptococcus of puerperal infections is neither virulent nor attenuated as such. These attributes depend upon the past history of the streptococcus, its origin, its soil, its environment—it can give rise to both the mildest and the wildest infections. The mildest are tenacious and prolonged because they do not produce systemic reaction and immunity. The very mildest infections, by their chronic irritation, produce only deranged function, such as hypersecretion—leucorrhea; others produce hypertrophy, as catarrhal changes, polypi and ectropion. Others less attenuated extend inwardly along the chain of lymphatics. The development of a phlegmon anywhere

along the path of the invaded lymphatic system must be looked upon as salutary in character. It is an expression of local reaction and attempts at arrest. Time, in lymphatic infections, is an essential factor. If time is permitted nature will avail herself of it but, unfortunately, in the more severe infections, the extension along the lymphatics is so rapid that the infections reach the blood stream before nature has had time to bring her forces into operation.

Lymphatic infections will be free from pain and symptoms which point to the pelvis as the source, if the peritoneum is not affected. If we watch our lymphatic infections closely we will find that, in the majority of cases, they are free from pain for many days then, suddenly, a severe stabbing pain occurs in one or other lower quadrant. The meaning is clear—the peritoneum has been reached and a localized plastic peritonitis has developed, just as a pleurisy over a subacute lung develops infection. In the acute cases the peritoneum—just as the pleura—is always involved, either along the region of the anterior or posterior (usually the posterior) wall of the broad ligament. The peritoneum is a large lymphatic space and throws out its exudate just as the lymphatics do, as will be pointed out later.

If the infection is of exteme virulence the peritoneal cavity becomes generally infected, owing to the absence of quick reaction. It is interesting to note the differences that the peritoneum present, under different infections. In some cases the peritoneal cavity is filled with free turbid fluid, filled with flocculi of exudate; in others the fluid is more or less clear. In others there is no free fluid but the coils of intestine and other intraperitoneal structures are all buttered with an exudate of a creamy color and consistency. One need not emphasize the futility of attempting to drain such an abdomen. When a local pelvic abscess occurs it is either intraperitoneal or extraperitoneal. The extraperitoneal abscess requires no further comment—its course is that of all lymphatic exudative liquifactions; but an intraperitoneal local abscess in the "pouch of Douglas" is quite another affair. The peritoneum is a most resistant structure, which can take care of a tremendous amount of infection. Not so, the lymphatic tissues generally. And I cannot conceive of a local pelvic abscess developing secondary to a broad ligament lymphatic infection except as a pathological process similar to that of the pleura and empyema following pneumonia where it has been proved that the empyema is the result of a small visceral subpleural abscess rupturing into or extending into the pleural cavity. The analogy is so close that I think the inference is warranted.—It is a fruitful source of research. The point I want to emphasize is that the vast majority of lymphatic infections are mild, and as such the peritoneal cavity is never affected and, therefore, lack pain as a determining factor.

Another interesting type of case is that in which the organisms find a port of entry in the pelvis, but invade the blood stream almost immediately, without causing any local symptoms in the pelvis, and

without leaving any signs of their passage at the point of entry. These cases are in a class by themselves. One sees them frequently in the wards—true septicaemias but not very sick patients.—Chills are uncommon, high fevers predominate, pulse usually not much elevated and a facies calm, placid and normal. Yet blood cultures are positive —anaerobic streptococci. There is only one inference to be drawn, that the streptococcus has many varieties, and many attributes, and that many of them possess high degrees of pathogenicity and slow dissemination, whereas others have high degrees of dissemination with low pathogenicity, and still other varieties possess high degrees of both dissemination and pathogenicity.

The first group will be rich in chronic and sub-acute local pelvic disease. The second group will produce the mild septicaemias without severe systemic disease, and the last group will be productive of the severe local and systemic infections.

The factor of dissemination or diffusibility of microbes—of their power to spread—is one that has not received the attention it merits. It is a factor of the utmost importance, in appreciating the mode or spread of disease. Without it a great deal of the utmost importance remains incomprehensible, it is something—a property—remotely akin to diffusion in gasses; to convexion in fluids and to conductivity in solids. It is allied to fleetness as distinguished from force.

It was stated earlier that when an organism has manifested a preference to spread by a certain path, it seems to have a predilection for tissues of the same nature or allied nature when it develops metastases. I stated that this amounted to specificity and was the basis of specific disease—How like the human this characteristic—patriotism, the attraction of soil, climate, food and environment! The result is that in puerperal sepsis, a lymphatic infection generally develops lymphatic metastases, whereas it will be pointed out later that cases of thrombophlebitides beget remote thrombophlebitides. It is common, therefore, to find that severe pelvic lymphatic infections develop lymphatic deposits in other parts of the body. The chief sites for the development of these metastases are in the legs, as phlegmasia alba dolens, in the neck, arms and back. A short description of such an invasion of the leg makes the process clear.

The lymphatic invasion of the leg usually begins at the groin or upper part of the thigh, though I have seen it begin simultaneously in several parts of the leg. When it begins in the groin or upper thigh the lymphatic invasion may be a direct extension from the pelvic lymphangitis or it may be a true metastasis. The process, however, is the same. The thigh begins to swell from above downwards—it becomes hard, pits with difficulty, is of milk-whiteness, and gradually extends to involve the whole leg. The veins are in no way involved except secondarily through pressure of lymphatic pressure or by extension of the infection to the intima of the small veins. But, in no sense is this a primary thrombophlebitis. If the infection is short-

lived the swelling will eventually completely disappear, owing to the restoration of the lymphatic circulation. If, on the other hand, the lymphatic stasis is of considerable duration there will result a permanent and, more or less, complete blockage with varying degrees of swelling. It is, I think, always possible, in the early stages, to distinguish between lymphatic stasis and thrombophlebitis of the legs, though the remote results may be singularly similar and confusing.

Extension by the Blood-vessels.

Pelvic thrombophlebitis contributes the largest number of tragic and unexpected deaths in puerperal infections. It is, by far, the most common type of pelvic infection, and is one that is least often diagnosed. The reason for this lies in the fact that pelvic thrombophlebitis, uncomplicated by a simultaneous lymphatic or mixed infection involves only the vein wall and its lumen, and is free from symptoms of any kind until remote complications arise—and these are usually of a very serious nature. Infections that travel by the veins are insidious, creeping and, except in the severe cases, kill not as a result of the infection, but by an accident of that type of infection, namely, "embolism". Embolism of pelvic origin always lodges in the lungs, and so insidious is the primary pelvic condition that the onset of any severe acute pain in the chest, during the puerperium should be looked upon as embolic in character, until we prove it otherwise. The incidence of pelvic thrombophlebitis and of small lung infarctions is much higher than any one is likely to assume, unless he is on the look out for the minor small infarctions. The larger ones are nearly always lethal, and the recognition of an earlier and smaller infarction may prevent the larger and more dangerous one, by the adoption of precautionary treatment. Uncomplicated pelvic thrombophlebitis may be suspected but is seldom diagnosed except when one or both of two complications arise, namely, pulmonary embolism or a remote metastatic thrombophlebitis.

Not only is pelvic thrombophlebitis insidious but it differs very markedly in its clinical types. The vast majority of these cases are mild infections beginning in a deep cervical tear or in the placental site. The lower the implantation of the placenta the greater the incidence of thrombophlebitis. In the mild infections, which are the most dangerous, the infection involves only the intima and the subintimal tissues. It is a debatable and interesting problem whether the infection starts in the vessel wall or in the clot. However, the clot becomes attached at a part of the vessel intima where the phlebitis exists, but the thrombus may extend widely along the blood stream by a process of accretion of fibrin. In one case the free portion of the thrombus was eleven inches long, floating in the stream, attached only at its distal end. The portion to become detached is frequently minute, in other instances quite large. The size of the detached portion will determine the size of the infarct in the lung. Lung

infarctions are frequently multiple—hence the importance of their early recognition.

Now, it is a well known clinical fact that embolism seldom occurs in the severe infections of a thrombophlebitis nature when the fever and the systemic symptoms are most pronounced but, by an irony of fate, embolisms are much more likely to occur in the very mild infections or when the severe infections are reaching the stage of defervescence and recovery.

Another means of diagnosing a suspected thrombophlebitis is by a remote metastasis in the leg or elsewhere. It is only of late that this metastatic process has been understood. I think the organism of thrombophlebitis—an anaerobic streptococcus—is specific, or approaches what we designate as "specificity". However, it has stamped upon it certain well defined predilections, and predilection, and not morphology, is the basis of most bacterial specificities. Be that as it may—when the organism of thrombophlebitis breaks away from its parent site it implants itself upon similar or closely allied tissues. A remote post-operative or puerperal thrombophlebitis of the left leg—(a favorite site) is usually secondary to a primary focus of thrombophlebitis at the site of operation, in post-operative cases, or in the pelvis in puerperal cases. The thrombus at the primary site of infection develops small vomicae of liquifaction. This liquifaction is microbic in character, and is a suspension of broken down blood cells. The area of liquifaction extends until it reaches the surface of the clots, evacuates itself into the blood stream, and is in such a fine state of division (broken down red blood cells and streptococci) that it passes through the capillaries of the lungs and gets into the general circulation. Now it chooses its new nidus. It will be the intima of a vein, and the most favorable vein will be a varicose vein, where the blood stream is retarded lacunae are formed, nutrition is defective, and injury frequent. What part of the human body has these characteristics more pronounced than the left leg and, more particularly the left saphenous, unsupported by muscle and subject to varicosities and injuries? Hence, its frequent involvement.

From the foregoing it will be evident that a thrombophlebitis of the leg is strong presumptive evidence of a primary focus elsewhere. Of course there are exceptions. Pelvic thrombophlebitis seldom breaks down into pus formation, but the same cannot be said of its complications—Lung infarctions frequently break down into lung abscesses and remove metastatic thrombophlebitis sometimes breaks down into an abscess. In lung abscess I think the inference is justified that secondary infection occurs. In remote metastatic abscesses the inference is not so clear or so tenable.

Since simple pelvic thrombophlebitis is so insidious and symptom free, and is diagnosed only by its complications, we are justified in the assumption that the primary condition is a much more common pelvic pathological entity than any of us assume. I look upon every

case of silent infection, in the pelvis, as possibly thrombophlebitic in character, until the patient has had five days of absolutely normal temperature and pulse. Even this precaution will not save all the cases from death by embolism. When looking over the pathological specimens in the museum, I was struck with the number of cases of death by embolism, weeks and, in a few cases, months after apparent cure of the infection. It would seem that, in a certain percentage of cases of thrombophlebitis, the thrombus formation is the chief factor. In others the phlebitis is the dominant pathology. A close examination of these cases brings out the fact that it is in the former group that late embolic complications are most likely to develop.

I wish to devote a few lines to another type of infection which, for want of a better term, I have described as cumulative.—I mean by this a low grade infection, which goes on developing insidiously, over a long period, without any pronounced symptoms, the patient frequently up and about, doing her duties, but not feeling well and, suddenly, she develops an hemorrhagic state. She bleeds from the musous membranes of the nose, mouth, uterus or intestines and into the skeletal muscles and, finally, purpura develops. The fatal result is, usually, not long delayed. In my experience it has occurred, most frequently, after self-induced abortion. A few cases will make the subject more forceful. A case I saw in the out-patients' department was a self-induced abortion with a piece of stove-pipe wire—she aborted three weeks previously, and came to consultation saying that "God was punishing her for her misdeeds and that her feet were mortifying." Her legs were black to the knees, with purpura. There had been two nose bleeds previously. Death occurred a few hours after admission.

Case II. I was called in consultation, to give a prognosis, in a case of insanity (puerperal); history of self-induced abortion twenty-two days previously; curettage by her physician two weeks before my visit. Patient was out of bed five days later and doing her light housework—she then suddenly developed a psychosis and, when I saw her, I recognized the condition as one of sepsis, with puerperal spots developing rapidly and, later, a general hemorrhagic state. Death occurred eight hours after consultation.

Case III. Called to the medical wards to see a recent admission; medical diagnosis suspected ectopic. I elicited the history of an induced abortion one month previously. Patient had been in service since, was not feeling well but was able to carry on—she then suddenly collapsed and was sent to hospital. When seen she was bleeding from all the mucous membranes and purpuric patches developed later. Death followed in a few hours after admission. I could add several other such cases, but the above suffice to illustrate the type of infection. Slow and cumulative, until suddenly the blood changes or blood-vessel changes are such that diapedesis becomes general.

Extension by Continuity of Surface.

The common gonococcal infection is the classic of this type. The average gonococcal infection is a mucosal and sub-mucosal one. It thrives on columnar surfaces, and once the cervix is infected, the infection has a continuity of columnar mucosal surface to the fimbriated end of the tubes. Usually a wife, when infected by a supposedly cured husband, is either sterile or she has but one child, followed by sterility, and that one pregnancy usually follows quickly after marriage before the G. C. infection has reached and closed the cornual ends of the tubes. The incidence of post-partum relighting of a gonococcal infection is small, because of the above stated facts regarding single pregnancies and sterility. The exceptions to this are found in those rare cases in which the disease remains localized to the cervix.

When a gonococcal infection relights after labor, it is practically always an acute salpingo-oophoritis, associated with a great deal of pain owing to the associated peritonitis. The condition usually manifests itself in one lower quadrant first and in the other a short time later. Later, a definite mass becomes palpable in the lower abdomen and plastic peritonitis may be quite extensive.

Diagnosis.—Eighty percent of puerperal infections are devoid of symptoms. Every case of fever in the puerperium should be considered puerperal in origin until proved to the contrary. A slight continuous fever of from 99° to 100° over several consecutive days bespeaks a local cervical infection, or a thrombophlebitis or, more rarely, a very mild lymphatic broad-ligament extension, and should be looked upon and treated as such until the diagnosis is confirmed, if confirmed it may be. For, in a large percentage of cases, the diagnosis will ever remain doubtful.

A delayed involution is usually the sequel to a cervical infection, except in the cases due to general debility, rapidly repeated pregnancies or chronic systemic disease. In all silent febrile infections, of unknown origin, one must never forget to catheterize the patient and eliminate or confirm pyelitis. About fifty percent. of post-partum pyelitides are also silent infections. In pelvic infections, as soon as the peritoneum or perineum are involved in the inflammatory process the condition manifests itself by pain. Extensive disease may exist in the silent area without giving any hint by symptoms of its presence. Mixed infections in the puerperium are common and are usually easily detected. Thrombophlebitic cases are all silent infections, and are diagnosed only by their complications, embolism and metastatic thrombophlebitis. Endocardial involvement secondary to puerperal infection is rare.

In prolonged sustained high fever, in the puerperal state, watch the pleural bases carefully, for secondary involvement from small infarcts.

Acute appendicitis is frequently indistinguishable clinically from acute right lateral puerperal peritonitis and each year, claims a quota of perforated appendices and deaths due to the association in point of time with the puerperal state.

Prognosis.—In summing up a case of puerperal sepsis, with a view to determining its outcome, there are three factors of the utmost importance. By far the most eloquent signs as to prognosis is the facies of the patient. A normal facies, with its placid outlook upon life will outweigh any other untoward combination of untoward symptoms. The local condition fades into almost insignificance in the presence of a normal facies. Percontra, an anxious expression, unnatural alertness, wide palpebral clefts, flushed cheeks, and fine fibrillar contractions bespeak a severe type, and cautions against unwarranted optimism.

The next most important sign is the pulse rate. Increased pulse rate is a local indication of stimulation of toxaemia. A normal pulse rate argues a low toxicity. Now, the pulse rate is merely a local and appreciable result of a general toxic state, but the toxic excitation is general, though not so easily appreciated. This excitation is followed, in due course, by a corresponding depression.

Therefore, a high pulse rate, in the absence of cardiac or thyroid disease, bespeaks a highly toxic state, and a guarded prognosis, whereas a slow pulse rate is a good prognostic sign.

Temperature, on the other hand, is reactionary and, therefore, salutary. Temperature is an expression of "a comeback"—of a reaction to a poison, and within certain limits denotes work to the patient's credit. These three prognostic signs may be combined in all forms and degrees, and the prognosis varies accordingly.

The most favorable prognostic signs in infection, are a normal facies, pulse of eighty or eighty-four, a temperature anywhere above normal and yet below 105°. A normal facies, a rapid pulse (120) and a high fever, calls for a more guarded prognosis. An ashen grey facies, with falling temperature and rising pulse rate, denote a very bad prognosis. Of course, there are special symptoms which enter in special cases, but do not alter the general trend, as outlined above.

Treatment.

The treatment of puerperal infections may be divided into—*Preventive, General, Surgical* and *Special* treatments.

Prevention, of course, will always outweigh cure in importance. It is not my purpose to stress perfection in technique, but one point I would like to stress and that is that severe puerperal infections, with few exceptions, are introductions from sources outside the patient. Hence, the importance of avoiding contaminating contacts with purulen and infectious material and, further protection of the patient by gloves and mask. It is my opinion that we do not stress sufficiently the absolute necessity of abstention from sexual intercourse. Three cases of very severe sepsis in one month, causing one death, were traceable directly to intercourse, shortly before the onset of premature labor.

When in contact with a case of severe exsanguination, or of a case in which there has been much instrumentation or manipulation, the

best preventive against infection lies in transfusion. Transfusion, to accomplish its best results, should anticipate infection. It is of very little value, and often harmful, when the infection is in full bloom.

Posturing the patient so that, as soon after labor as convenient, she should be taught to lie prone, with her limbs apart, for ten minutes twice daily, and taught, while so disposed, to breathe deeply. Water drinking should be encouraged—its value could hardly be over estimated.

General treatment is of the utmost importance. Under this heading is included all that appertains to nursing in its best form. No detail should be too small to be attended to, and everything should be done to promote the patient's comfort. Under this heading I would stress *symptomatic* treatment, for the relief of any distressing symptom. Ninety percent of cases will cure spontaneously under good nursing. In the severer cases, posturing is of great importance. Patients should be turned from side to side every two or three hours, to prevent bed sores and hypostasis. Ice should be applied to relieve acute peritoneal pain. Narcotics may be administered with good effect. Sleep must be promoted by somnifacients or narcotics. Headache relieved by ice-bag to the head and the ingestion of large quantities of water to dilute the toxaemia, of which the headache is an expression.

An easily digested diet, in small doses and at frequent intervals.

The development of special symptoms must be met by special means, which would prolong, unduly, to outline in this article. Stimulants are not only not required but are harmful in the early days of a severe infection. Toxaemias are stimulating. The rapid heart action, the rapid breathing and muscular twitchings are sufficient evidence of this. Reserve stimulants of all kinds until the systems begin to flag.

Surgical treatment, in the acute puerperal infections, has very little scope. It is restricted to packing the uterus for septic uterine haemorrhage or for the evacuation of pus. Surgery should not be attempted too early, to evacuate an inflammatory deposit in the pelvis or elsewhere. Wait until the abscess becomes easily accessible, and fluctuation is elicited in the pelvis; this will be either through the posterior vaginal fornix, or above Pouparts ligament or over the crest of the ilium posteriorly and, very occasionally, in the upper inner thigh. There is only one valid reason for invading a septic uterus surgically, and that is for the control of (septic) haemorrhage.

I do not hesitate to state that a septic woman's chances of recovery are diminished by one half by invasion of the uterine cavity during the febrile state.

Six weeks after a sub-acute infection of the cervix it will be found that the residuum is a chronic endocervicitis, and probably a degree of subinvolution as a result of it.

The application of the small nasal electric cautery to the cervical canal cures the endocervicitis and hastens the retarded involution. This cauterization of the cervix, with Wappler's rheostat and electric

nasal cautery point, is painless, prompt and effective. It can be done in the office without anaesthesia, and the patient gets up off the examining table and goes about her daily duties. A weak formaline douche, under low pressure, once daily keeps the parts clean until healing is complete. The cervical discharge is copious for the first week after cautery; it then diminishes and disappears completely in two or three weeks.

Special Treatment.—The number of special preparations that have enjoyed a reputation, for a short period, is legion. One may categorize these by stating that all preparations of antiseptics to be used intravenously have passed into the limbo of oblivion. Vaccines and antitoxines are now seldom used. Their questionable virtue lies not in their specific action but rather in their protein content. The colloidal suspensions of precious metals are of very debatable value. If they contain any value at all it is also due to the colloidal reaction and not to the metal. So far the treatment is chiefly negative. But we have a very potent remedy for good in a protein reaction in puerperal fever. The mildest protein reaction is that induced by the subcutaneous injection of human fresh whole blood. I have seen a very large number of such blood injections and have yet to witness a single unfavorable result. The treatment consists in abstracting 10 c.c. of fresh blood from any healthy donor, and immediately injecting the same subcutaneously into the patient.—There is a time limit in which this must be done, i.e., it must be injected before it has time to clot in the syringe. The injection should be repeated once daily.

A more severe protein reaction may be obtained by the injection of from 5 to 10 c.c. of boiled skimmed milk. This is generally given with a moderately long needle intramuscularly.—Occasionally reactions occur after such an injection, usually there is generalized pain and so-called rheumatic joint pains. The very occasional syncopal attack, it is said, is due to too much fat content in the milk.

My procedure is to use whole blood in the very severe infections and milk or aolan (a lectalbumin prepared in phials by Parke Davis & Company, in the sub-acute or chronic infections.

Blood transfusions are indicated as a preventive measure in puerperal sepsis. They are of less value in the early days of the sepsis, and are a positive danger when the patient is in the full blown infection. Transfusion reactions in severe sepsis are very frequent and very often lethal. The reason is not hard to find. When the patient is in the height of a severe infection her blood does not conform to her usual group. She is slightly de-grouped by the infection, and it is almost impossible to find a perfect donor for her. With nearly all donors of her blood group there will be rouleaux formations and then, by the extent of these, may be judged the amount of reaction that may follow. In a large number of cases that have come under observation only ten per cent. have been benefited by transfusion —the other ninety percent. were rendered more seriously ill, and fifty

per cent. of them were left in a moribund state an hour or so after the transfusion. Generally speaking, you do not get this highly unfavorable reaction in the first five days of the fever, but you may expect it, if you transfuse, at a later date.

A word of final encouragement.—The outlook in puerperal sepsis is generally favorable. Sustaining treatment with careful amelioration of the symptoms by appropriate therapy—and the abstention from heroics will give the patient the best chances for ultimate recovery. A small percentage of cases receive such a severe flooding of virulent infection that the case is hopeless from the onset.—These, to-day, are fortunately very rare. The milder cases are vastly in the ascendent, and the outcome, in these cases, warrants the highest optimism.

Some Record—For several millions of people to have the following record speaks well for progress in health work in New York City:—

"No Fatal Smallpox in Seventeen Years."—New York City experienced one of the healthiest winters in its recent history, according to department of health officials. Contagious diseases have greatly decreased, but during March the health wave was broken by an epidemic of measles which was not as widespread as similar epidemics in 1926 and 1928. There was about 30 per cent. less employment among nurses than in corresponding months, last year. With the use of toxin-antitoxin cases of diphtheria have decreased 50 per cent. There has not been a smallpox death in New York, it is reported, in seventeen years. Deaths from tuberculosis have been brought down 70 per hundred thousand of population. An increase is noted in insanity and diabetes, and cardiac disease.

Rheumatic Fever*

DR. A. H. GORDON, Montreal.

J. G. was a boy of 13 and was born in Glasgow and came to Canada at five. He had Rheumatic fever at 8, lasting some weeks. At 12 his tonsils were removed, not because he had sore throat, but because the school doctor advised it. He had no other diseases. He could play with other children and did well at school. Lately his color was not very good and his father thinks he is getting thinner.

On December 3rd he felt chilly in school and shivered all day. That night he had pain in his ankles, the next day in his knee and in both hips. Then he got a bad pain in his left side, then in his shoulder, and over his heart, where it was very severe. He stayed at home a week in bed and then was brought to the hospital. When I saw him he was propped up in bed and his wan little white face looked old and worried. He breathed painfully and with a short grunt. His nails and lips were blue and his fingers slightly clubbed. His pulse was 120 and the temperature 103. To make a long story shorter, he had a large heart with signs of mitral and aortic endocarditis and a pericardial effusion as well as dulness at his left lung base. In addition he had a fleeting arthritis. He vomited often and was in constant distress in breathing.

He improved for a time and the temperature came down somewhat, but went up again, and it did this six times in the three weeks he was in hospital. His leucocytes ranged from 23.000 on admission to 10.000 on discharge. The red cells were 3.000.000 and the haemoglobin 65%. He went home in the ambulance with a temperature of 100 and pulse of 116 to remain in bed three months more and is now free from fever but with a sadly damaged heart.

The next picture:—A young woman of 20, a nurse in training, who had all the diseases of childhood, including scarlet fever, was subject to colds and sore throat until Tonsillectomy at 15. At 10 she had severe growing pains in the feet and ankles and calves, most severe at night. She was always active and took part in all sports and had no shortness of breath.

In January, 1927, she began to have pain in her feet and ankles with some swelling and she reported to the Orthopaedic Department and was transferred to Medicine, February 28th. Examination showed a displaced and forcible apex impulse and an apical systolic murmur with a much accentuated pulmonary second sound. After a few days the pain in the ankles disappeared but frequent leucocyte

*A Post-Graduate Lecture, 1928.

counts were all in the neighbourhood of 10 and 11.000 and an electrocardigram showed a P. R. interval of .22 second returning later to .20 second. In spite of the normal temperature and pulse she was regarded as a case of acute Rheumatism and put on prolonged bed rest.

Again:—Peter L. aet. 5½ years was a healthy baby until one year old. Since then he has had croupy coughs most of every winter. No tonsilitis. He never was really robust, and is undersized and underweight. A few weeks ago he had a pain in the stomach with vomiting and on being examined a mitral leak was found.

This child has been snuffling without apparent reason for the last three weeks and the mother says that he complains that his underwear is too tight and he is always hitching his hips on this account, though she has specially made his clothing of ample size. When examining him he would frequently stick his tongue halfway out. Advice was desired as to the removal of tonsils and adenoids but as the condition was regarded as choreic an operation was postponed.

These three cases have been taken as illustrations, not because either singly or as a group they show all the features of Rheumatic fever, but because they appeared in succession within a short time of each other, and a short time ago, and they may keep us from wandering too far afield in a region which is clinically boundless.

If a text were needed for a talk upon the Clinical Aspects of Rheumatic fever, it would properly be taken from the book of Jeremiah, the weeping prophet, and no words would suit it better than these: "Peace, Peace, when there is no Peace". The prophet of evil was never any more popular than a death's head at a feast, and he, with the candid friend and truthful critic, will get scant encouragement to proceed, but anyone who chooses Rheumatic fever for a subject cannot go far without being forced to adopt the roll of one or the other, or all three.

Rheumatic fever has, as a disease, a more unpleasant past, a more troubled present and a more gloomy future than any other malady of which we know anything. And altho it appears but seldom on certificates of death under its own name, it peoples the graveyards of the country in an appalling fashion under a legion of other names.

It took generations for the doctrine of the unity of Tuberculosis to be established in Medicine, but now all of us think in terms of the Tubercle Bacillus when Lupus, Hip Joint disease, Pleurisy with effusion, Meningitis or Phthisis is mentioned. We do not look upon any of them as sequels of Tuberculosis. We think of them *as* Tuberculosis. And so when we think of Mitral Stenosis, Chorea, of Adherent Pericardium, of Auricular fibrillation, of Subcutaneous nodules, of forms of continued fever, or of migratory arthritis, we should look upon them not as results of Rheumatism but as *Rheumatism* itself.

By such an attitude we cease to look upon the disease as a short lived nuisance, which in some instances in the distant future may

cause trouble in the valves of the heart, and regard it instead as an invader which once established digs itself in, working under ground month after month with perhaps occasional ruffling of the surface, bringing about eventually a damaged heart muscle, a narrowed valve, damaged arteries and damaged kidneys which all the king's horses and all the king's men cannot set to rights any more.

In the inexorable march towards physical breakdown which the rheumatic infection sets going, one cannot help being reminded that

> "The moving finger writes, and having writ moves on,
> Not all your piety or wit can call it back
> Nor cancel half a line,
> Nor all your tears wipe out one word of it."

This, then, in some sense is the sort of thing we think about when we talk of Rheumatic fever.

What is the agent responsible?—that it is an infection no one can doubt. That it is a special organism of the streptococcus group, Poynton and Paine believed twenty-five years ago and some still hold, but few have been able to confirm. As late as January, 1927, Small, of Philadelphia, published a study of an organism which he believes satisfies the requirements for an etiological factor, but it will require more detailed study. This is a Streptococcus named by him the Streptococcus Cardioarthritis, obtained from the blood of an adult patient with Rheumatic fever, which he was able to grow on media, and on injection into rabbits to produce an Arthritis and, in one instance, choreiform movement. There were focal necroses and inflammatory foci in the heart muscle, resembling but not identical with Aschoff's bodies. He prepared a horse serum and treated a number of cases of Rheumatic fever with varying success. But whether either or neither of these organisms is eventually established in the seat of dishonour, the histological basis of the disease is now firmly fixed.

The essential histological unit or Submilliary Nodule is found in the heart muscle, on the pericardium, in the synovial membrane of a joint, and in the subcutaneous nodule. It is of vascular origin and shows an active proliferation of the endothelial and fibrous tissue cells of the neighborhood. Polynuclear leucocytosis is not a feature, any leucocytic reaction being of a lymphocytic character. The lesion is essentially a productive one.

Taking this unit as our starting point, in the same way as we have the Miliary tubercle in Tuberculosis, how can we explain the course of the disease?

Carey Coombs insists that Rheumatic fever should be regarded as a disease of childhood, and states that three-quarters of the cases do so begin, and again the parallelism with tuberculosis and syphilis may be invoked. Infections of Tuberculosis in early life and syphilitic disease in its earlier and secondary stages tend to be generalized and severe. In later life there tends to be a more local but more locally

severe reaction, for example, ulcerative or caseating pulmonary tuberculosis, or local tertiary syphilitic manifestations. This type of reaction, Von Pirquet refers to as allergy or altered reaction, and is an effort by the body already sensitized, to react violently, locally, for the purpose of restricting the infection to a smaller area. This same form of reaction Homer Swift says is seen in Rheumatic fever.

In children the wide spread nature of the diease is seen in Chorea, in nodules and in Carditis, either together or successively; and in adults the more violent local reactions are seen in the joints, as acute and painful arthritis, and as sclerosing processes in the Mitral and Aortic valves.

A very interesting observation by Swift is that in Acute Rheumatic Arthritis, bits of joint tissue when excised showed the typical vascular and perivascular lesions found in subcutaneous nodules, and when the patient had received no salicylates there was marked oedema, but when Salicylates had been given the exudation was less marked, but the proliferative lesions were still to be found.

There are then two general types of response to the rheumatic poison. One proliferative, represented by the Submiliary nodules, uninfluenced by Salicylates, the other exudative, with the signs of joint inflammation, and which subside under Salicylates. This offers a reason why, after the apparent cure of the symptoms of Acute Rheumatism, the slow but certain progress of cardiac damage goes on.

This chronic proliferative type of reaction may explain many cases of rheumatic endocarditis without a history of rheumatism, and on the other hand what may be regarded as recurrent attacks of rheumatism may be but the appearance of exudative features in a person for a long time the subject of rheumatic infection in its proliferative form.

One may then speak of Rheumatic fever as a general disease with submiliary nodules of proliferative nature in various organs; and the common feature of rheumatism as we know it clinically, the valvular endocarditis, has this same origin. Coombs and Swift have shown, and Swift has demonstrated in four cases dying early in the course of rheumatic arthritis that the heart valves show proliferative change and submiliary nodules in their interstitial tissue before any verrucae are deposited upon their surface, and that these verrucae or warty vegetation arise from thrombi deposited upon the endothelium at the site of the interstitial inflammation.

Submiliary nodules in the substance of the myocardium, proliferative in character, with a tendency to necrosis at the centre, described in 1904 by Aschoff, and known by this name are the essential and typical lesions of Rheumatism in the heart muscle, and from these develop areas of fibrosis which lead to the breaking down of the myocardium.

Letulle, Bezanson and Weil make the observation that from the histological character of these lesions one is justified in comparing

the action of the rheumatic virus yet unknown, to that of Tuberculosis and Syphilis.

In the absence of definite knowledge of the cause of Rheumatism, the inquiry has been pursued along many lines, and the social aspects of the disease have come in for much study. G. F. Still states that in the Children's Out patient Department of King's College Hospital, among 229 medical cases, between six and ten years old, 13.1% showed evidence of Acute Rheumatism in some form, whereas in 700 consecutive cases of the same age among private patients, chiefly well to do, only 7% showed evidence of Rheumatism. Two investigations in recent years have shed much light upon Rheumatism as a social disease, one a report of the Medical Research Council of Great Britain, the other the report of the Sub committee of the British Medical Association on rheumatic heart disease in children. From both of these I shall quote freely.

The first inquiry took as a basis the histories of a group of patients suffering from Rheumatism or Rheumatic Carditis drawn from Great Ormond Street Hospital, London; St. Thomas' Hospital, London; and the Royal Hospital for Sick Children, Glasgow; and a control group of histories of 100 non rheumatic children of the same hospital class.

It was found that among the living brothers and sisters of the rheumatic cases 8% had rheumatism, while among the non rheumatic only 2% of the brothers and sisters were affected, and the parents of rheumatic children had rheumatism much more frequently than those of the non rheumatic. These figures would point to the probable infectious character of rheumatism, and all of us have seen instances in which the disease has occurred too frequently in one neighborhood to be regarded as a coincidence. Within the past few months three members of one class in a training school for nurses came down with acute rheumatism within one week of each other.

The association of rheumatism with sore throat has always been a live question, and in the Medical Research Council's group the proportion of healthy throats was significantly greater in the non rheumatic patients than in the rheumatic ones, but the number of healthy throats was no greater in the members of non-rheumatic families than in the non-rheumatic children of rheumatic families. One very interesting series of statistics refers to 129 cases who had tonsil operations, and subsequently developed rheumatism. These operations were all done on members of rheumatic families. Of these 129, 60 who had clear records of satisfactory enucleation developed rheumatism up to 9 years after operation.

Reginald Miller, in the B. M. A. Committee's report, followed the histories of rheumatism developing in 45 cases previously subjected to Tonsillectomy. He found sore throat, arthritis and carditis to be greatly diminished in the cases of Rheumatism developing in patients whose tonsils had been previously removed. Muscular pains

continued to be frequent and chorea seemed to be totally uncontrolled by previous tonsillectomy. The fact that 45 cases in one group and 60 in another developed rheumatism after tonsillectomy shows that the removal of diseased tonsils is only one factor in dealing with those predisposed toward the disease.

An interesting feature of the disease which has been commented on from time to time is the social distribution of the cases. The figures given by Still showing the great predominance of hospital cases over private cases are confirmed by very many other observers.

In the Research Council report the families studied were grouped into Classes A, B and C; the A families having sufficient incomes and a margin over, the B group being just able to make ends meet and with no margin over, the C group being distinctively under the poverty line. The cases of rheumatism were disposed in the proportion of 13% to A, 65% to B, and 22% to C. So that if wealth is a bar to rheumatism extreme poverty alone does not apparently induce the disease.

Such features as the vocation of parents, comfort of dwellings, alcoholism in the parents, congestion of sleeping quarters, quality of clothing, body cleanliness and freedom from vermin and distance from school, were all studied and found to have little or no bearing upon the incidence of the disease, whereas better maternal care, greater freedom from dampness and higher elevation of houses were all noted among the control cases.

A most interesting sidelight on the problem appears in the comparison of the general incidence of rheumatism in the Children of London board schools with that in four "poor law schools" to which children are sent on account of destitution, illegitimacy, death of parents, etc. These resident schools contain from 250 to 550 children each, and are well lighted, with ample space, in the suburbs of London, and the children are well fed, and only one per cent of cases of rheumatism were found among the inmates, as compared with 3.6% in the board school where the children lived at their own homes.

Rheumatism is a disease of the towns rather than the country. In the English recruiting figures there were 32 cases per thousand of vavular disease of the heart in youths from the East Riding of Yorkshire to one per thousand from the Channel Islands; and in Wales rural Carmarthen showed two per 1.000 and industrial Cardiff 22 per 1000.

It is also a disease of childhood, 1% of children entering school at Bath and 2.36 leaving had organic Heart disease.

Though the late winter and early spring bring most cases of Rheumatic fever into hospitals there is rarely a time of the year that a case is not to be found in a medical ward, and a detailed description of the clinical features seems unnecessary. We might, however, spend a few moments on a definition of what the disease is and what it isn't.

It is a general infection in which the heart is practically always affected and frequently permanently damaged, and in which the

nervous system is often involved. It has frequent periods of febrile reaction, commonly associated with a multiple non suppurative and non deforming arthritis. Neither this nor any other definition will cover all we mean nor leave out what we do not wish to include.

The features of Rheumatism are simulated and even its name applied to a multitude of affections of the joints and here we may define the differences as we see them clinically. An arthritis may be due to a recognizable and nameable disease a Rheumatic fever, Scarlet fever, Cerebrospinal meninigitis, Pheumonia, Typhoid, Dysentery, Tuberculosis, Syphilis or Gonorrhoea, but only one of these is *Rheumatism*. So called *Infectious Arthritis* includes another group due to infection from the tonsils, teeth, sinuses, prostate, female genital tract, lungs and bronchi, gall bladder or bowel, and these are not Rheumatism. Again—the types spoken of as Primary progressive polyarthritis and Primary Osteo-arthritis, and finally gout, and none of these are Rheumatism.

The diagnosis of Rheumatic fever from the other forms of arthritis is sometimes simplicity itself, and sometimes extremely difficult. No single absolutely diagnostic feature exists, but a multitude and migratory arthritis which is both painful and tender, usually preceded by a tonsilitis and accompanied by cardiac involvement and leucocytosis, which yields to Salicylates, and which leaves no deformity, is characteristic of Rheumatism.

On the other hand, an arthritis, multiple at first and later localizing in one joint, with limitation of movement from any other cause than pain is not likely to be Rheumatism. Similarly an onset in young boys of very acute pain and tenderness about one joint is more significant of acute epiphysitis.

The more lingering types of arthritis without heart involvement always raise the question of some non-rheumatic state, and I confess that in some the positive diagnosis seems impossible except through time.

Rheumatism as it is seen in children gives the most significant clue to the understanding of the disease. The cycle of anaemia, chorea tonsillitis, arthritis and rheumatic nodules in which more often than not the arthritis follows rather than precedes the other features, illustrates the aspect of a general infection, which I think is the important feature we should bear in mind. What have been often described as predisposing causes toward rheumatism and chorea are almost certainly symptoms of the disease.

A child who is pale, irritable, fidgety, inclined to sore throats and unexplained fever, and in whom tuberculosis can be excluded, should be regarded as a potential subject of rheumatic infection and safeguarded accordingly. The matter of fever may introduce a doubt into the diagnosis of Rheumatic Carditis, for naturally the association of Endocarditis with fever, raises the question of Subacute Bacterial Endocarditis. It is not perhaps generally recognized that the Endo-

carditis of Rheumatism may be the source of continued fever; but such is the case. The question, of course, is readily cleared up by the finding of the strepococcus viridans in the blood culture, which establishes the presence of the subacute form. A negative blood culture, however, simply means "not proven"; but a careful estimate of the clinical features usually gives the answer. The presence of embolic signs strongly suggests the graver disease, and these may be found in the petechial spots on the limbs or body, in the tender points in the ends of the fingers and toes, in flame shaped patches in the retina, in sudden splenic pain and tenderness in the presence of red blood cells in the urine, and in cerebral embolism.

The fever of subacute endocarditis is likely to be of higher range and more irregular type. Clubbing of the fingers and enlargement of the spleen suggests the subacute form, and also does the more rapid change in Cardiac sounds under observation; but the development of Auricular Fibrillation is on the other hand characteristic of the rheumatic infection. Cheadle, whose delightful monograph on "The rheumatic state in Childhood" was published in 1889, first emphasized the fact that many children had rheumatism and rheumatic heart disease long before they had arthritis.

Subcutaneous nodules, which aside from mitral stenosis are the one incontrovertible sign of rheumatism in the living, would seem to be less common in this country than in England; but they are usually found most often where the search is most careful. Barlow and Warner in 1881 pointed out their importance in rheumatism. They are subcutaneous, attached to fascia or tendons, and are to be felt rather than seen, varying in size from a hemp seed to an almond. They are usually painless, and are found over the malleoli, the elbows, the exterior and flexor surfaces of the hands and the extensors of the feet, the vertebral spine, the scapula and the occiput. They may come in crops and may last from days to months. Cheadle points out that the prognosis is graver the greater their number.

Chorea—a phase of the Rheumatic Cycle, has of late come to be regarded as a true encephalitis of rheumatic origin, and I shall not do more than lay stress upon its inclusion in the unity of rheumatism, except to point out a pitfall in the diagnosis from so called habit spasm. A Tic or habit spasm is more localized and more stereotyped, but having said that, it would take a Sydenham or an Osler to say in some instances what was Chorea and what was not. In the matter of skin rashes, many such have been regarded as rheumatic and it is traditional to speak of Rheumatic Purpura and Rheumatic Erythema. In the realm of speculation all men are free and equal, but speaking for myself I know of no rash which can with proof be called rheumatic.

The treatment of Rheumatic fever must of necessity be considered in sections for though the disease is one, its treatment in the form of Mitral Stenosis and heart failure, offers a problem as different from

the treatment of Rheumatic Arthritis, as is the treatment of Pott's disease from that of Acute pleurisy. For that reason we shall confine ourselves to the management of the earlier and progressive phases of rheumatic infection.

In the Acute Arthritis we have two aspects—as acute tuberculosis pleurisy has two aspects. 1. An acute and painful illness to be symptomatically treated and 2. A warning of the presence of systemic disease, the care of which will run into months or years.

The first group of symptoms results from the exudative reaction in the joints, and demands bed rest—absolute bed rest. The profuse sweating requires sponging and a bed garment of the nature of flannel or flannelette. Much can be done for the patient's comfort by immobilizing the joints. Cotton batting or pillow splints are useful about the knees and ankles. Hot lead and opium fomentations or ice packs bring comfort. The application of Oil of Gaultheria acts as a counter irritant and may be of service though practically no salicylate effect can be expected from its absorption.

We are fortunate in having a drug or drugs Salicyl and Cinchophen Compounds which in 80% of cases, if properly employed, rapidly give relief to the pain and the fever. The proper employment implies the giving of the drug to the point of toxic effect or improvement. Fifteen grains (1 gm.) every hour will answer on the average, and as a rule, six to ten such doses produce the symptoms of nausea or tinnitus. The drug is then discontinued for 12 hours and two thirds of the dose given the next day and repeated as required. Given thus we have all seen the almost miraculous results in the relief of pain. Delirium and renal poisoning may occur. Acetyl Salicylic Acid (Aspirin) may be given in two-thirds the dose of Sodium Salicylate, or Neo Cinchophen (Tolysin) in an equal dose to the Salicylate. Tolysin is insoluble in water, and less readily absorbed, and thus probably causes fewer toxic effects. Undoubtedly, however, there are individual peculiarities and one may give relief when the other fails.

In regard to toxicity, the fatal dose of the Sodium Salicylate is from 1 to 1.5 gm. per kilo of body weight and of Acetyl Salicylic acid about half that amount. Neo Cinchophen seems not to be fatal in any dosage. The average toxic dose of Sodium Salicylate was found by Hanzlyk to be for males 180 grains (12 gm.) and for females 140 grains (9 gm.) of Acetyl Salicylic acid 100 gr. and 85 gr. and of Neo-Cinchophen 225 gr. or 15 gm.

As to the specific action of the Salicyl group toward rheumatism, Hanzlyk is of opinion that this has not been proven, as similar relief has been given by combinations of opium and non salicyl analgesics, though he admits that in two parallel groups of cases, these treated by salicyl received a better measure of relief. His impression is that the salicylates are efficient symptomatic remedies which may be administered in large doses combining antipyretic and analgesic effects, and their efficiency outweighs any danger to kidney function which

their use may entail, but in no way must they be regarded as specifics against Rheumatic infection; one illustration of this being that with the symptomatic improvement, subcutaneous nodules may continue to appear, the heart show progressive involvement and the leucocyte count may continue high. In spite of this, the lowered fever and pulse rate, the relief of pain and the sense of well being engendered, save labour to the heart and shorten the period of convalescence. One hazard in Salicylate medication which must be considered is the artificial sense of improvement under the drug, as a result of which patients have been allowed up, and on withdrawal of the salicyl have had relapses, or have developed symptoms of cardiac damage.

The most difficult period in the treatment is when symptomatic improvement has occurred and more liberty is demanded. It takes considerable back bone in the physician to refuse such liberty, but in view of what we know of the pathology of the disease one must be adamant on this point. May we remind ourselves again that the Acute Arthritis is only an incident in the disease, that in addition to the exudative features shown by the arthritis, the proliferative process still continues, and that involvement of the Myocardium in this process is not the exception but the rule. As an example of this, one may quote the work of Cohn and Swift in which of 37 cases of Acute Rheumatism having daily electrocardio-graphic tracings, 35 showed signs of myocardial damage, either a prolonged P. R. interval, alteration in the ventricular complex or the occurrence of numberous irregularities in the rhythm. Facing this fact, we are as blamable if we allow a patient up and about as soon as his fever subsides, as we would be should we permit a patient with an acute pleurisy to return to work without treating him as a case of incipient tuberculosis, or as we would be if we permitted a syphilitic to go untreated once his primary sore had healed. It is regrettable that even with prolonged period of rest we cannot guarantee future cardiac soundness to the rheumatic patient, but to give him ample rest is the one best thing that we can do. Rest for how long? Five signs there are which help us to say how long—

Normal temperature; Normal pulse rate; Absolute cardiac regularity; Gain in weight and colour; A normal leucocyte count. These are the outward and visible signs of subsidence of the infection and as a rule this takes at least 100 days and after that there should be a period of convalescence without work. Even then we may remember that after 100 days Napoleon returned from Elba and set Europe by the ears, and the 100 days may sometimes need to be lengethened to 100 weeks.

In the meantime what may be done? There are the tonsils. I hesitate to say it, but in this disease when life hangs on what we do—the attitude toward the tonsils is that they should be considered guilty until they are proved innocent—and who is sufficient for this thing? If we recall that in the figures given above there were many

relapses and even new attacks of Rheumatism after tonsillectomy, but the type of attack was milder and cardiac damage less pronounced it is hard to see how we can take the responsibility of leaving tonsils which are even suspicious. All other septic foci should be treated, but the tonsil is the most important.

In the matter of feeding I think the uric acid bugaboo has died a natural death. Rheumatic fever has no more connection with uric acid than it has with the War in China, and what a convalescent from acute infection requires is good food and lots of it, and this is true of Rheumatism.

Another matter of therapy concerns sunshine, and direct sunlight or the Quartz lamp. Either or both of these is of great value, as the aid which they give in combating chronic infections makes them especially useful in this long struggle. Iron and Cod Liver Oil as the patient can take them are of definite benefit.

Therapeutically, however, we are still in the same position toward this disease as we are toward Chronic Nephritis, and as we were toward Diabetes before Insulin. Until we know the etiology we "manage" our cases, we do not "treat" them, and since "management" has done so much for Tuberculosis we can hope for much in rheumatism. It is taken as a matter of course that six months is practically a minimum in the treatment of Tuberculosis and we should not grudge that in treating this disease which is a greater vital and economic menace.

You may recall a paper by Sir Wm. Osler in 1919 on the prevention of venereal disease in which he analyzed the mortality returns of England and Wales for 1915 and found that 1886 deaths were debited to Syphilis out of a total of 562,000. He dissected the returns and taking such causes of death as meningitis, general paresis, tabes, cerebral haemorrhage and thrombosis, insanity, aneurism, organic heart disease and still births, and considering the percentage of each which were syphilitic, he found that Syphilis rose from 10th place to 1st place among "the ten best killers" and assumed the place of "Captain of the men of death". Similarly if Rheumatism were to be blamed for its proportion of the Cardiac, Arterial and renal deaths, its place in the rogues gallery would be very near the top, and we who daily see its ravages, in those who largely people the medical wards of all hospitals, cannot look at the mildest form of its appearance and say "Peace, Peace, when there is no Peace."

A daily paper states that a new musical instrument combining a saxophone and bagpipes has been invented. That's not a musical instrument—it's a weapon.

Here lies the body of William Jay. He died maintaining his right of way. He was dead right, as he sped along. But he's just as dead as if he'd been wrong.

Wm. H. Welch, M.D., LLD., Sc.D.

Johns Hopkins, Baltimore.

EARLY in April Dr. W. H. Welch, "The Dean of American Medicine," observed his 80th birthday by a party in Memorial Continental Hall, Washington, D. C. He was seated on the platform with such persons as the President of the United States, the President of Cornell University and Director Simon Flexner of the Rockefeller Institute for Medical Research. As usual practical recognition was to be made. It was rather difficult to make a choice for this octogenarian already has 18 degrees, plenty of medals, holds active or honorary offices in dozens of societies. *Time* says:—

"Final decision: a dry point etching by Alfred Hutty. Print No. 1 went to Dr. Welch. The rest of the edition (45 copies) was scattered over the world medical institutes, colleges, museums. As the prints of the etching were presented to various medical groups, ceremonies were held similar to the one in Washington."

The *Weekly News* magazine just quoted gives a further resume of his life activities.

"Curious people who wish to see so magnetic a personality had best not write for an appointment. In his book-littered bachelor quarters he piles the day's mail, unopened, on a great oak table. Over this a newspaper is spread on which the following day's mail goes. This unique filing system usually collapses after a few days; the mail is thrown in the waste basket by a despairing housekeeper."

"Dr. Welch has held virtually every position in the Johns Hopkins medical school. Its first dean, he resigned to devote his entire time to the chair of pathology, which he hald for 32 years. In 1916 he organized the School of Hygiene and Public Health, one of the first of its kind in the world, and became its director. In 1926 he resigned "to give younger men a chance." assumed the chair of History of Medicine which he founded. Three years later he opened the Welch Medical Library, one of the world's great medical libraries."

Yet how often are found the feet of clay and here where least expected. The same authority says,—

"Fourth generation representative of a medical family, young William Welch decided when he was graduated from Yale to upset Welch tradition, to teach Greek and Latin instead of studying medicine. He realized his mistake after a year, went back to Yale, then to the College of Physicians and Surgeons (Manhattan), then to Strassburg, Leipzig, Vienna, Berlin, Breslau, where he rubbed elbows with mountainous medical names; Paul Ehrlich (discoverer of salvarsan):

Koch, (discoverer of the bacilli of anthrax, tuberculosis, cholera), Pasteur (vaccines).

He returned to the United States and immediately began spreading the new, heretical doctrine that disease was caused by microscopic bodies. He found a fertile field for his missionary work. At Bellevue Hospital (Manhattan), he set up a labaratory, studied, taught, practiced what he preached.

In the late '60's Johns Hopkins, wealthy Quaker merchant of Baltimore, provided money to establish there a University which would include a hospital and a medical school. Much preliminary preparation was necessary before the medical school could be opened. Finally in 1883, needing a pathologist to open the school, the trustees despatched an emissary to Germany to find one. The Germans sent the emissary back to the United States. "Find Welch," they said. "We have no one bigger."

Three other medical men were found for the nuclei around which Johns Hopkins was to grow great. One was a young Canadian, William Osler, destined to become Sir William Regius Professor of Medicine at Oxford. Before going to Hopkins he had had ten years teaching experience at McGill University, Montreal. For his work there he was later to get the unofficial title "Father of Modern Medicine in Canada." The other two nuclei: Dr. Howard Kelly, now an internationally known surgeon, and the late Dr. William Halstead, whose fame was his operative technique for the eradication of goitre.

Once the school was functioning a long parade of students started, whose praise of Dr. Welch was to amount to little short of canonization. They have justly credited to him a connection with almost every great advance in United States medicine in the past 45 years."

It then caps the climax with this incident,—

"When he was moving his office last year the moving men found a great pyramid of books in a corner of his old office. As the books were taken away, corners of a desk appeared under the pile, finally a whole desk. Dr. Welch was surprised; confessed that he had lost the desk several years before."

The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Confined to, and Covering every Practising Physician in Nova Scotia. Published on the 5th of each month. Advertising Forms close on the 20th. of the preceding month. Subscription Price:—$3.00 per year.

VOL. IX JUNE 1930 No. 6

The Medical Society of Nova Scotia

PROPOSED PROGRAMME OF THE 77th ANNUAL MEETING.

July 1st, 2nd and 3rd, 1930, at the New Pines Hotel, Digby, N. S.

Tuesday July 1st, 1930

10.30 a. m. Business Meeting of Health Officers' Association.
1.00 p. m. Luncheon.
2.30 p. m. 2nd Session of Health Officers' Association.
4.00 p. m. Meeting of the Executive.
7.30 p. m. Dinner and continued Meeting of Executive.
7.30 p. m. Health Officers' Association.

Wednesday, July 2nd, 1930

9.30 a. m. Registration.
10.00 a. m. Meeting called to Order:

(a) Minutes to be approved as published.
(b) Consent to be asked for the presentation of Report of the Executive to be laid on the table till the afternoon session, Adoption of 1st clause.
(c) Consent to be asked for presenting Treasurer's Report same to be laid on the table.

(d) Naming of three members to act with the Auditors as a Finance Committee.

(e) Naming of Nominating Committee.
Routine Business as per constitution.

11.30 a. m. Address in Surgery and Discussion—"The Surgery of the Wrist,"—Dr. T. W. Harmer, Boston, Professor of Anatomy, Harvard University, Clinical Surgeon Massachusetts General Hospital.

12.30 p. m. Adjournment.

2.30 p. m. Routine Business.

3.00 p. m. Paper "Cancer of the Rectum"—Dr. R. M. Benvie, Stellarton, N. S.

3.30 p. m. Paper "The Cancer Problem"—Dr. N. H. Gosse, Halifax, N. S.

4.00 p. m. "Orthopedic Symposium"—Doctors Acker, Morrison and Murphy of Halifax, N. S.

4.45 p. m. Adjournment.
Golf.

8.00 p. m. Informal Dinner Dance.
Address of Welcome—Mayor T. C. G. Lynch, Digby, N. S.
Presidential Address—Dr. E. O. Hallett, Weymouth.
Address—Dr. A. T. Bazin, of Montreal, Subject—"The Canadian Medical Association."

Thursday, July 2nd, 1930

9.30 p. m. Routine Business, Reports of Committees.

10.30 a. m. Address in Obstetrics—Dr. J. R. Goodall, Montreal. (Title to be announced).

11.30 a. m. "Report Tuberculosis Commission"—Dr. K. A. MacKenzie, of Halifax, N. S.

12.00 noon. "The Canadian Pensioner"—Dr. Ross Millar, Ottawa.

12.30 p. m. Adjournment.

2.30 p. m. Paper, "Malarial Treatment of G. P. I.", Dr. Gerald R. Burns, Halifax, N. S.

3.00 p. m. Address—"Hospital Medical Staffs" Dr. G. H. Agnew, Associate Secretary, C. M. A., Toronto.

3.45 p. m. Paper—Dr. W. R. Dickie, Barton, N. S. "A Resumé of Cardiology."

4.15 p.m. Unfinished Business.

6.00 p.m. Adjournment *Sine Die.*

8.00 p. m. Meeting of new Executive.

INSTRUCTIONS.

There is ample accommodation at The New Pines Hotel for over 150, besides 26 cottages suited for parties from 4 to 6 persons in each. Every room in the hotel has a bath and each cottage a bath with running water in the rooms. The situation of the hotel offers a wonderful view of the beautiful scenery around Digby. Swimming facilities are provided by a salt water pool immediately in front of the hotel. Table d'hote meals will be served and the Orchestra will play at Luncheons and Dinners. There will be no additional charge for the Dinner Dance save for gratuities.

The rate per day, three meals and room, will be Seven Dollars ($7.00). Arriving Wednesday morning and leaving Thursday afternoon would be a day and a quarter.

The meeting of the executive will be held in a small dining room and the business and scientific meetings of the Society will be held in the Concert Hall; Registration will be in this hall; in order to register the annual fee must be paid.

A medical golfing enthusiast will arrange a tournament, playing the first nine holes before breakfast and the second nine before dinner.

As the ladies of Digby will desire to extend courtesies to the visiting ladies please advise early in June as to the number coming.

The Secretary had the nerve to ask Dr. Benvie of Stellarton to bring Mrs. Benvie with him and she has promised to bring her violin.

The following items have been contributed to the BULLETIN by Mr. James Wilson, Manager for Canada of the J. B. Lippincott Company, Publishers, whose International Clinics have been reviewed in this Journal:—

At first the world was flat. Then some one discovered it was round. Now it is crooked.

Fair Maid: "Oh, sir, what kind of an officer are you?"
Officer: "I'm a naval surgeon."
Fair Maid: "Goodness, how you doctors do specialize."

"Dear Doctor: My pet goat is seriously ill from eating a complete leather-bound set of Shakespeare. What do you prescribe?"
Answer: "Am sending *The Literary Digest* by return mail."

"I am going to buy myself a harem."
"I saw a sign at the gas station that said: 'Six gals, for a dollar'."

Association of Medical Health Officers
Sixteenth Annual Meeting

Digby, Nova Scotia, July 1st, 1930.

OFFICERS.

President	Dr. A. S. Burns, Kentville.
1st Vice-President	Dr. W. F. McKinnon, Antigonish.
2nd Vice-President	Dr. A. K. Roy, North Sydney.
Secty. Treas.	Dr. T. Ives Byrne, Halifax.
Council	Dr. T. R. Johnston, Great Village. Dr. N. McDonald, Sydney Mines. Dr. F. E. Rice, Sandy Cove.

PROGRAMME.

Tuesday, July 1st, 1930.

Morning Session—10.30 o'clock.

Minutes of previous meeting.
Committee Reports.
Correspondence.
Appointment of Nominating Committee.
Paper—"The Importance of Reporting All Cases of Communicable Diseases". Dr. J. K. McLeod, M.H.O., Sydney.
Paper—"Comments on the Recent Epidemic of Scarlet Fever." Dr. A. E. Blackett, M.H.O., New Glasgow.

Afternoon Session—2 o'clock.

Presidential Address—Dr. A. S. Burns, Kentville.
Public Health—Dr. T. Ives Byrne, Provincial Health Officer.
Paper—"Notes on a Study of Tuberculosis Overseas." Dr. P. S. Campbell, D.M.H.O.
Routine Business.
Unfinished and New Business.
Further meeting for business, if necessary, will be announced for Tuesday evening or Wednesday.

When a Medical Health Officer attends the Annual Meeting of the Association of Medical Health Officers of Nova Scotia, and presents a certificate to that effect from the Secretary of the said Association, he shall be entitled to reimbursement from the town or municipality of the expenses incident to such attendance. (Sub. sect 9) Sec. 33, Ch. 157, R. S., N. S. This certificate of attendance may be procured from Dr. Byrne, the Secretary-Treasurer.

The Medical Society of Nova Scotia

HONORARY MEMBERS—1930.

Name	Year Elected	Address
Buckley, George E.	1922	Guysboro, N. S.
Perrin, A. M.	1923	Yarmouth, N. S.
Stewart, John	1922	South St., Halifax, N. S.
Webster, H. B.	1923	Kentville, N. S.
Cox, Robinson	1925	Upper Stewiacke, N. S.
Chisholm, D. McI.	1927	Port Hood, N. S.
Fox, Charles James	1927	Pubnico, N. S.
Kendall, Arthur S.	1927	Sydney, N. S.
MacMillan, Finlay	1922	Sheet Harbor, N. S.
McIntosh, Daniel	1923	Pugwash, N. S.
Miller, Samuel N.	1926	Middleton, N. S.
Moore, Willis B.	1927	England.
McLean, John W.	1927	North Sydney, N. S.
Mack, Joshua N.	1928	Ogilvie St., Halifax, N. S.
Murray, D. A.	1928	River John, N. S.
Densmore, J. D. Sr.	1928	577 Pine St., Manchester, N. H., U. S. A.
McKay, J. W.	1928	New Glasgow, N. S.

ACTIVE MEMBERSHIP—1930.

IF your name is not here from fault of the Secretary or the Royal Bank, please advise at once. If your name is absent from your own fault or omission think it over and, if possible, remit.

Acker, J. C., 315 Barrington St.. Halifax.
Acker, T. B., 315 Barrington St., Halifax.
Archibald, B. C., Glace Bay.
Archibald, D. W., Sydney Mines.
Atkinson, E. P., Oxford.
Atlee, H. B., 31 South St., Halifax.

Ballem, J. C., New Glasgow.
Banks, H. H., Barrington.
Barss, G. A., Rose Bay, Lunenburg Co.
Bates, J. F., Glace Bay.
Bayne, C. M., Sydney.
Beckwith, C. C. Nova Scotia Sanitorium, Kentville.
Bell, J., New Glasgow.
Belliveau P. E., Meteghan, Digby Co.
Benvie, R. M., Stellarton.
Bishop, B. S., Kentville.
Blackett, A. E. New Glasgow
Bliss, G. C. W. Amherst.
Braine, L. B. W., Annapolis Royal.
Brison, E. P., Victoria General Hospital, Halifax. (B)
Brown, G. W. Clarke's Harbor.
Bruce, James, Sydney.
Bryne, T. I., Provincial Health Officer, Halifax.
Buckley, A. F., 209 South St., Halifax.
Burns, G. R., 81 South Park St. Halifax.
Burns, A. S., Kentville.
Burton G. V., Yarmouth.
Burris, M. G., Dartmouth.

Calder, A., Glace Bay.
Calder, A. Sydney.
Cameron J. J., Antigonish.
Cameron, O. H., River John, N. S.
Campbell, A. B. Bear River.
Camphell, A. R., Yarmouth.
Campbell, C. G., West Branch, River John.
Campbell, D. A., Bridgewater.
Campbell, J. G. D. Halifax.
Campbell P. S., Port Hood.
Carroll, J. J., Antigonish.
Carter, P. McF., Sydney.
Charman, F. D., Truro.
Chisholm, A. N., Port Hawkesbury.
Chishol, H. D., Springhill.
Churchill, L. P., Shelburne.
Churchill, J. L., Halifax.
Chute, F. F., Canning.
Cochran, W. N., Mahone.
Cochrane, D. M., River Hebert.
Cochrane, P. S., Wolfville.
Colwell, W. G., 30 Spring Garden Road, Hali.ax.
Corbin, H. H., (deceased), Halifax, N. S.
Corston, J. R., 335 Brunswick St., Halifax.
Connors, V. F., Noel Hants Co.
Cole, W. H., New Germany.
Corbett, H. R., N. S. Sanatorium, Kentville.
Creighton, H. A., Lunenburg.
Culton, A., Wallace.

Cunningham, A. R., 260 Barrington St., Halifax.
Curry, W. A., 121 South Park St., Halifax.

Davis, F. R., Bridgewater.
Dechman, A. A., Bridgetown.
Deveau, G. R., Arichat.
Devine, M. E., Kingston.
DeWitt, C. E. A. Wolfville.
Dickie, W. R., Digby.
Digout, J. H., St. Peters.
Dinsmore, J. D., Port Clyde.
Doiron, L. F., Grand Etang, Inverness Co.
Donkin, C. A., Bridgewater.
Doull, A. E., 34½ Morris St., Halifax.
Doull, A. E. Jr., 34½ Morris St. Halifax.
Dunn, G. A., Pictou.
Dunbar, W. R., Truro.
DuVernet, E. Digby.

Eaton F. F., Truro.
Egan W. J., Sydney.
Elliott C. S., 100 Gottingen St., Halifax.
Eliott, M. R. Wolfville.

Farish, G. W. T. Yarmouth.
Fillmore, M. J., Advocate Harbor, Cumberland Co.
Finlay, F. S. 252 Robie St., Halifax.
Forrest, W. D., 257 Barrington St., Halifax.
Ford, T. R., Liverpool.
Fuller, C. K., Yarmouth.
Fuller, L. O., Shelburne.
Fulton, S. A., Truro.
Fultz, W. E., Glace Bay.

Gandier, G. G., Dartmouth.
Gillis, R. I., Baddeck.
Gilroy, J. R., Oxford.
Glenister, E. I., 184 Portland St., Dartmouth.
Goodwin, B. E., Amherst.
Gosse, N. H., 82 Spring Garden Road, Halifax.
Graham, J. V., 51 Coburg Road, Halifax.
Grant, H. A., Neil's Harbor.
Grant, W., Wolfville.
Green, F. W., Glace Bay.
Granville, T. E., Bedford.

Hall, E. B., Bridgetown.
Hallett, E. O., Weymouth.
Harrison, L. L., 105 Morris St. ,Halifax.
Hawkins, Z., South Ohio, N. S.
Hartigan, D. J., New Waterford.
Havey, H. B., Stewiacke.
Hayes, K. P. J., Sydney Mines.
Hayes J., 82 Oxford St., Halifax.
Hemmeon, J. A. M., Wolfville.
Hennigar, C. S., Liverpool, N. S
Herbin, C. A., Lockeport.
Hill, F. L., Port Greville.
Hogan, E. V., 109 College St., Halifax.
Hopgood, E. P., Nova Scotia Hospital, Dartmouth.
Hattie, W. H., Dartmouth.

Johnstone, E. J., Sydney.
Johnstone, L. W., Sydney.
Johnstone, S. R., 54 Inglis St., Halifax.
Johnson, T. R., Great Village.

Keating, W. J. 301 Brunswick St., Halifax.
Keddy O. B. Windsor.
Kennedy, A. Antigonish.
Kennedy, G. B., Moser Eiver, N. S.
Kent, H. V., Truro.
Killam, H. E., Kinsman's Corner, Kings Co.
Kirkpatrick, H. W., 317 Barrington St., Halifax.

Lavers, F. C., Hazeldean New Ross, Lunenburg Co.
Lawlor, F. E., Nova Scotia Hospital, Dartmouth.
Lebbetter, T. A., Yarmouth.
LeBlanc, B. A., Arichat, Richmond Co.
LeBlanc, J. E., West Pubnico, N. S.
Lessel, J. F., 151 South Park St., Halifax.
Little F. R., 94 Gottingen St.
Lockwood, T. C., Lockeport.
Lynch, J. G. B., Sydney.
Lyons, J. N., (deceased), Halifax.
Lovett, L. J. Bear River, Digby Co.
Mack, F. G., 140 Spring Garden Road, Halifax.
MacAskill, F. G., Glace Bay.
McCurdy, D. S., Truro.
Macdonald, E. W., Reserve.
Macdonald, J. J., New Glasgow.
Macdonald, N., Sydney Mines.
MacDonald, R. F., Antigonish.
MacDonald, W. M., Westville.
McDonald, H. K., 11 Coburg Road, Halifax.
Macdonald, D. J., 168 South St., Halifax,
McGarry, P. A., Canso.
McGrath, J. P., Kentville.
McInnis, D. F., Shubenacadie.
Munro, J. S., North Sydney.
McIntosh, G. A., 253½ Robie St., Halifax.
MacKay, H. H., New Glasgow.
MacKay, H. F., New Glasgow.
MacKay, W. A., Thorburn, Pictou Co.
MacKenzie, K. A., 89 Spring Garden Road, Halifax.
McKenzie, M. D., Parrsboro.
MacKiggan, J., Port Morien.
MacKinnon, H., Berwick.
MacKinnon, W. F., Antigonish.
MacKintosh, A. E., Amherst.
McLean, J. A., Glace Bay.
MacLean, T. W., Scotsburn, Pictou Co.
MacLellan, J. A., Sydney.
MacLellan, R. A., Rawdon, Hants Co.
MacLellan, R. G., Lunenburg.

McLennan, S. J., 197 South Park St., Halifax.
McLeod, F. J., Inverness.
McLeod, D. A., Sydney.
MacLeod, F. T., New Waterford.
MacLeod, M. G., Whycocomagh.
MacMaster, D. J., Antigonish.
McNeil, D., Glace Bay.
McRae, D. R., Sydney Mines.
McRae, W. R., Whitney Pier.
MacRitchie, J. J., Goldboro.
Mader, A. I., 57 Morris St., Halifax.
Malcolm, F. F. P., Dartmouth.
Marcus, S., New Germany.
MacKinnon, D. L., Truro.
MacMillan, C. L., Baddeck.
MacDougall, J. G., 95 Spring Garden Rd., Halifax.
Mader, V. O., 149 South Park St., Halifax.
Marshall, A. M., 90½ Gottingen St., Halifax.
Mathers, R. E., 34½ Morris St., Halifax.
Meech, L. R., North Sydney.
Melanson, A. R., (deceased), Eel Brook, Yarmouth Co.
Melanson, H. J., Corberrie, Digby Co.
Messenger, F. S., Middleton.
Messinger-Pearson, S. M., Lawrencetown.
Miller, A. W., New Waterford.
Miller, A. F., Nova Scotia Sanatorium, Kentville.
Morrison J. C., New Waterford.
Morrison, L. N., Mahone.
Morrison, M. D., Halifax.
Morse, L. R., Lawrencetown.
Morton, C. S., 52 Spring Garden Road, Halifax.
Morton, L. M., Yarmouth.
Muir, W. L., 240 Jubilee Road, Halifax.
Murphy, G. H., Carleton St., Halifax.
Murray, D., Tatamagouche.
Murray, J. S., River John, Pictou Co.
Merritt, J. W., 317 Barrington St., Halifax.
MacLellan, D. F., New Glasgow.
Miller, C., New Glasgow.
Morris, C. H., Windsor.
McQueen, C. A. S., Amherst.
McDonald, E. M., Sydney.
Morton, A. McD., 52 Quinpool Rd., Halifax.
McDonald, D., North Sydney.

O'Neil, F., Sydney, N. S.

Parker, V. H. T., Stellarton.
Patton J. W. T., Truro.
Patton, W. W., Port Morien.
Payzant, H. A., Dartmouth.
Phinney, W. S., Yarmouth.
Poirier, W. G. J., New Waterford.
Pollard, J. E. Hantsport.
Pothier, H. J., Weymouth.
Pratt, N., Alton, Colchester Co.
Proudfoot, J. A., Inverness.
Pentz W. H., Halifax.
Purdy, W. T., Amherst.

Ratchford, H. A., Inverness.
Rehfuss, W. N., Bridgewater.
Reid, A. R., Brooklyn, Hants Co.
Reid, J. B., Truro.
Rice, F. E., Digby.
Rice, G. E. B., 11 Spring Garden Road, Halifax.
Robbins, W. H., New Glasgow.
Rockwell, W., River Hebert, Cumberland Co.
Rowlings, D. MacP., Musquodoboit Har.
Roy, J. J., Sydney.
Reid, J. W. Sr., Windsor.
Roy, A. K., North Sydney.

Saunders, R. McK., Lunenburg.
Schaffner, A. A., 109 Jubilee Road, Halifax.
Schwartz, H. W., 183 South Park St., Halifax.
Shankel, F. R., Windsor.
Sieniewicz, T. M., 6 Oakland Road, Halifax.
Simpson, J H. L., Springhill.
Skinner, B. W., Hubbards
Smith, F. P., Mill Village, Queens Co.
Smith, G. K., Hantsport.
Smith, G. W., Merigomish, N. S.
Smith, J. W., Liverpool.
Sparrow, C. J., Reserve.
Spiro, C., New Glasgow.
Stone, O. R., Sherbrooke.
Sutherland, D. R., Middle Musquodoboit.
Sutherland I. R., Annapolis Royal.
Sutherland, R. H., Pictou.
Shlossberg, R. S., Nova Scotia Sanatorium, Kentville.

Thomas, L., 299 Brunswick St., Halifax.
Tompkins, M. G., Dominion.
Trites, C. B., Bridgewater.

Walker, S. L., Spring Garden Road, Halifax.
Walsh, F. E., Springhill.
Wardrope, M. J., Springhill.
Webster, C. A., Yarmouth.
Weir, A. F., Freeport.
Wickwire, J. C., Middleton.
Williamson, S. W., Yarmouth.
Wiswell, G. B., 186 Robie St., Halifax.
Woodbury, F. V., 105 South Park St., Halifax.
White, G. F., Bridgetown.
Whittier, M. J., Maritime Home for Girls, Truro. (B)

Young, M. R., Pictou.
Young, S. P., New Germany.

Zwicker, D. W. N., Chester.

Under No Obligation

A 1930 draft for membership in the Medical Society of Nova Scotia was returned to the bank with this endorsement:—

"Drawee says he is under no obligation to the Medical Society and does not intend to pay this amount."

It is rather difficult to decide what mental attitude caused this fairly well known physician to so advise a bank clerk, that this endorsed refusal of acceptance and payment should be recorded. It could not have been misunderstood and entire responsibility for the statement must be placed upon the physician.

Now the statement was made because the doctor really believed it or else wanted to get clear of paying the annual fee. In either case he has made an egregious ass of himself. If he believed it, he is deceiving himself and no one else, for there is an idea implicated that he has no need of anything that the Society can give. This might have been swallowed in the old days when a second doctor being called to a case looked at the medicine prescribed by his rival, (not confrere), and poured it in the sink or threw it in the garbage, doubtless to save the lives of all in the house and, incidentally that of the patient. It is unsafe to-day for a doctor to be known as not attending medical society meetings or conventions. "Why should I go to these meetings to listen to these fellows boosting themselves. It's too old stuff for me." No, this man couldn't stand it and didn't go; then the community couldn't stand him and he had to seek pastures new. The public knows that every doctor needs everything he can get from association with other practitioners, and if he doesn't seek this aid he is soon judged as unsafe. As far as his local prosperity is concerned such an attitude is foolish and suicidal.

Let it be clearly understood that Dr. Blank says, he "is under no obligation to the Medical Society," then he must have already discharged that obligation, for he did owe it both to himself and to his patients, once upon a time. This interpretation of the motive inspiring his unfortunate remark is, however, more absurd, if that were possible than any others. This is an obligation or debt that can never be discharged in view of the new developments in medicine from day to day. Nor can the account be closed while a man poses as a practitioner in the service of his fellow man.

Now a word as to the conclusion drawn from this absurd and illogical attitude—"does not intend to pay the amount." It is quite evident he wishes to convey the idea that it is because the Society is of no benefit to him. Strange to say he has at last hit upon something to which agreement is possible. He does not mean to pay and in his present mental attitude he couldn't get any value for his money if he did pay. Somewhat of an anomalous statement but quite true.

Perhaps the crux of the whole matter is,—that this practitioner has been going through life trying to see what he could get out for little or nothing put in. Now, perhaps, he is reaping what he has sown and his income, financial and otherwise, seems to be on the road to the vanishing point. After 20 or 30 years of work he is not getting anything worth while from association with his medcial confreres, just when he needs them the most.

Life is a pretty drab empty affair when the service obligation cords are severed, and that not by physical death but by moral suicide.

S. L. W.

When in New Glasgow not long since, a friend with considerable Scotch in him, told us a number of characteristic stories of the canny Scot. We recall a few—

"A canny couple from the North when on a visit to London took a journey in the 'Underground.' While descending in the lift the old man was looking at a notice which read: 'Spitting strictly prohibited—penalty forty shillings.' when his wife whispered to him:

"Eh, John! I think I'm gaen to be sick."

"No' here, woman! no' here!" cried John. "Look at the notice It costs twa pounds just to spit!"

A Scotchman, wishing to join the police force in Birmingham, was asked by the Inspector: "What would you do to disperse a crowd?"

"Weel" replied the Scot, "I dinna ken what ye wad due in Birmingham, but if I were in Aberdeen, I'd pass the hat."

At a church annual social the minister had taken for the subject of his address, "The Perfect Man." Pausing after an eloquent passage he put this question to his audience: "Has anyone here ever seen or heard of a perfect man?" After a thrilling silence a little man stood up at the back and piped:

"Yes, sir, I have!"

"You mean to tell me that you have seen or heard of a perfect man?" demanded the incredulous minister.

"I've never seen him, sir, but I'm tired hearing aboot him," piped the voice.

"And who is he?"

"My wife's first man."

The oldest tinker in Scotland died recently having tramped the country till he was nearly ninety. A Highland minister once tried to influence him, "Have you ever been inside a kirk Donald?" he asked. "Naw! but I've seen the ootsides of mony a braw kirk." "Can you say the Lord's Prayer?" "Naw! every mon to his trade. Can ye sooder (solder) a tin can?"

Branch Societies

ANNUAL MEETING HALIFAX BRANCH OF THE MEDICAL SOCIETY OF NOVA SCOTIA

THE second oldest Medical Society in Canada held its Annual Meeting at the Dalhousie Health Centre Wednesday evening, April 23rd, 1930. Away back in 1844 the Halifax Medical Society was organized and for ten years met frequently for discussion of matters relating to the welfare of the community. The initial reason for this organization was a proposal to exhume bodies interred in St. Paul's Cemetery as the Mayor feared such removal "might spread a pestilence in the City".

In 1854 the Medical Society of Nova Scotia was organized by 18 doctors in Halifax and some 40 from outside districts. Until 1866 the Society held regular meetings in Halifax, outside members generally attending by proxy. An inevitable development then took place by the formation of County Societies in Halifax, Pictou, Yarmouth, Lunenburg and Digby. The Halifax Society again became a body by itself, but one of the component parts of the Medical Society of Nova Scotia, with which it has ever since been identified. Nor did a change of name later really change its status, although for many years it was known as the Halifax Branch of the British Medical Association. Thus the Halifax Medical Society has a continuous history of some 87 years. Now a Branch of the Medical Society of Nova Scotia, it is in the unique position of being 10 years longer in existence than its Society mother.

For a number of years the annual meeting of the Halifax Medical Society has been associated with a banquet, but the recent passing of Dr. Lyons, Vice-President for 1929-1930 and of Dr. Corbin, an active member, was too fresh in mind to suggest the festal board. Also appropriately the first order of business was a tribute to those departed. Dr. H. B. Atlee paid an eloquent tribute to Dr. Lyons referring in particular to his happy disposition, and his never failing humor. Being called to go several miles at mid-day over a hot desert to vaccinate the Arab servant of an English General the 2nd memo on the official order read, "Let Mahomet come to the Mountain." Named then and there the "*Joker*", has been his nickname ever since.

Dr. C. E. Kinley, a classmate of Dr. H. R. Corbin, paid a friend's tribute to his character and ability. Even at the Halifax Academy

and at Dalhousie his active mind led him to concern himself very fully with all phases of life. It was thus only to be expected that he would almost at once upon beginning practice identify himself with the civic life of Halifax.

Upon a standing vote the Secretary was instructed to make suitable entry in the Minutes of the passing of these two members and to convey the sympathy of the Society to those who mourn.

A matter which called for a very general expression of opinion was the suggestion, that perhaps the several clinics might err in giving free treatment to those who could pay a reasonable fee. It was brought out that all patients applying for treatment after the first consultation are duly investigated by the Welfare Bureau or Nurses as to their eligibility for treatment. Instances of patients, arriving and departing in their own cars, upon investigation have been fully explained. As the clinics are both for health and teaching purposes no deserving cases are likely to be refused.

About 15 meetings were held during the winter with an average attendance of 34, being a distinct gain over previous years. Notice of motion was given to limit speeches on the discussion of papers to five minutes and further that the Society's business should not be considered when visitors are present. The finances of the Society received considerable attention as it was felt that out of a total membership of 95, more than 47 should pay the annual fee. It was resolved to employ a collector and notify those owing two years and over that the Society would consider dropping such from membership at the beginning of the next season.

Officers were elected as follows:—

President.....Dr. W. L. Muir.
Vice-President.....Dr. F. G. Mack.
Secretary-Treasurer.....Dr. N. H. Gosse.

Executive (nominated to the Medical Society of Nova Scotia) Doctors Cunningham, Granville, Glenister, Acker T. B. and Mader, V. O.

"Ho, Baron Flagon-Rush, you're coming to our affair to-night, aren't you?"

"Don't see how I can, Mrs. Goitre—you see, we've got a case of diphtheria in the house."

"Well, bring it along, Baron—we'll drink anything."

Seeking new thrills, and the Missis is looking over plans for a new house this summer with accommodations for more young men with modern appliances. (From May issue of the U. S. *Publisher.*)

Reviews or Exchanges

THE *Bulletin* of The New York Academy of Medicine for April, 1930 has reached our office. It always contains valuable material for the student Physician. This is not wholly on account of its strictly scientific contents, but because it revels in fields of thought that broaden the mind and outlook of the thoughtful practitioner. We are too apt to think progress in our Art and Science of medical practice is to be found in the latest research work and detailed conclusions of eminent clinicians, and the Student Practitioner directs his journal reading along these specially scientific lines. While there is more in Medical Education than only mind development, more to our profession than work and more to play than amusement, the wise practitioner looks backwards as well as forwards, abroad as well as along his road of daily routine.

Perhaps some one will suggest that this is merely another repetition of the idea that doctors should have some hobbies or other forms of relaxation. But it is more than recreation in the ordinary meaning of that word. It is rather a constant *re-creation* of our mental outlook, and should become a habit in order to develop a broad mental character.

Having this in mind this monthly *Bulletin* appears to us to purposefully attempt to accomplish this end. The present issue has a further contribution on functional and nervous problems in Medicine and Surgery entitled, "Neurocirculatory Asthenia", more or less of interest to physicians and surgeons neurologically inclined. But then follows a most delightful account by Dr. F. H. Garrison, Consulting Librarian of the Academy on "A Medical Tour in Europe." A meeting of the Germanic Society of History of Medicine at Buda Pest, September 5-11, 1929, was the main objective of the tour according to Dr. Garrison. But reading of his stay in London, his visits to Copenhagen, Stockholm, Hamburg, Leipzig, Vienna, Munich, Strasburg and Paris, the real objective was evidently to gain information and inspiration from the many medical libraries and museums to be found in Europe today. The nations, that until recently, were the chief makers of history have a wonderful treasury in MSS., books, charts, pictures, appliances, exhibits, etc., to delight and inspire the eager visitor.

We think, moreover, that this tour will be productive of much good in encouraging in the United States and Canada the further development of libraries and museums already so well established. At any rate medical men everywhere should recognize the value of Medical History, not only in a College Curriculum, but as a diversion of great benefit to the Student Practitioner.

Two, or three times we have employed the term "Student Practitioner," the reason being obvious.

S. L. W.

Hospital Notes

HAMILTON Memorial Hospital, North Sydney, whose extension was formerly opened the latter part of April, announces the receipt of $100.00 from Hon. W. D. Ross, Lieutenant Governor of Ontario for the fund for the new hospital. Governor Ross is a native of Boularderie and has many relatives in Cape Breton.

The Sisters of the Hospital and the Ladies' Auxiliary have publicly expressed their appreciation of the cordial community support accorded to their recent undertaking.

An interesting feature of the afternoon was the presentation of a French decoration to Sister Irinaise, the head nursing sister of the hospital, on behalf of the French government by Mr. E. Lacroix, French consul, in appreciation of her many acts of kindness and services towards the large number of French patients who have been inmates of the hospital.

The City Hospital, Sydney, held very interesting graduation exercises on the evening of May 6th, 1930 at the Lyceum theatre. The graduating class consisted of eight nurses and five diplomas were presented, presumably the other three will be presented later, the local reporter not explaining this matter clearly.

Besides a Nurses' pin and a diploma each graduate received a floral offering, listened to an essay on their duties and a farewell from their recent associates. These functions would not be complete without civic, cleric and medical participation. By this time Mayor McConnell discharges the pleasing duty of presenting the diplomas as naturally and with as much ease as he calls some Councillor to order when occasion requires. Rev. A. H. Campbell delivered the official graduating address and Doctors J. K. McLeod, Ross, Land and Roy advised the class very freely, which they could well afford to do.

Prizes were awarded for bedside nursing, highest aggregate standing and for general proficiency, being presented to Misses Helen Holland, Maude Huntington and Rita Jones, respectively. In her valedictory, Miss Huntington paid a tribute of respect to the late Dr. John McDonald; so also did Dr. Ross in his address. The audience endorsed these references by a striking silence.

The medical profession of Nova Scotia through its official Journal, **The Bulletin**, extends congratulations to these young ladies who have worked hard for three years to qualify for the nursing profession. We hope they have been advised not to look upon their work as a temporary occupation until something better offers, for it really holds for them, if they truly desire it, the best that Life has to offer, the final blessing, "She Hath Done What She Could."

Referring to the recent Detroit incident perhaps the Public Health Service in Nova Scotia will appeal to some of these recent graduates.

S. L. W.

Foreign Nurses.—In Detroit an effort is being made to classify Canadian Nurses as undesirable immigrants. At least an effort was made to release from duty in Detroit all Canadian born or trained nurses, who had not taken out United States Citizenship papers. Possibly they were to be excluded under the Alien Labor Act. Perhaps as the domestic supply of United States Nurses is not sufficient, a Reciprocity or Customs agreement might be considered. Let Canadian nurses grasp very firmly the belief that they are only tolerated because of their ability and the limited local supply. Let Canadian Hospitals and Canadian Physicians unite to make our Nursing Service so attractive that fewer of our talented nurses will be compelled to seek employment in a foreign country.

"Well, my little fellow," said the doctor, "We'll have to send you to the hospital." Said the youngster: "I don't wanna baby I wanna puppy."

Professor: "Can you give me an example of a commercial appliance used in ancient times?"

Student: "Yes, sir, the loose-leaf system used in the Garden of Eden."

The census taker approached a little tumbled down shanty on the outskirts of Savannah and pushed his way through a bunch of little pickaninnies who were playing in front of the door. He knocked. The door was opened by a large lady of color. After the usual preliminary questions the statistic gatherer asked:—

"What is your husband's occupation, Liza?"

"He ain't got no occupashun. He's daid. He done passed away fo-teen yeahs ago, suh, replied the negress."

"Then who do all these little children belong to?"

"Deys mine, suh."

"Why, I thought you said your husband was dead."

"He is, but 'ah ain't."

Correspondence

BY making membership drafts through the bank the Secretary is not in receipt of as many personal and pertinent letters as would otherwise be expected. Occasionally one comes that is worth repeating. We can see the ruddy face, the twinkling eyes and the betwitching smile of E. J. J. as he penned recently the following lines:—

"Dear Dr. Walker,—

I am enclosing you a P. O. Order for my dues to the Nova Scotia Medical Society. Being a married man yourself I am surprised at you drawing on another married man so soon after Xmas, or the first of the New Year. I hate drafts any way, one is so apt to catch cold in the winter.

Yours truly."

Excerpts from a letter written by Dr. W. B. Moore formerly of Kentville, now for several years a veritable "Globe Trotter", and published in the *Advertiser*.

"DUBLIN, March 18, 1930.

"Dear Mr. Rottler:—

"Your father's old home, Baden, in the southwestern part of Germany, is one of the most attractive sections I visited, and has been famed for many years for its medicinal springs, and also for celebrated Universities for advanced education. Especially Heidelburg Freibourg. It is a beautiful country with many fine farms, tilled to the highest possible degree, and producing great crops of grass, grain and roots. We had a delightful trip through the south and west of Germany after leaving Switzerland, and especially enjoyed a journey of nearly two hundred miles down the Rhine River to the beautiful city of Cologne. My boy Hugh, whom you may remember, was at Weisbaden, Germany with the British Army of occupation for about two years, and, of course, we made quite a long visit there to see him. He is now a Major in the British medical service and was over here to see us before leaving for India about two weeks ago, where there is considerable danger of rebellion; and he was sent with a contingent of British troops. It is a dangerous job, but I hope the trouble will quiet down before it is worse.

"Kentville seems to have changed and increased in buildings and from what I saw in **The Advertiser** is steadily progressing. My old shack has vanished and a fine building in its place gives you a more pleasing outlook than formerly. As you could see I didn't do much to make it attractive, but it answered the purpose until I got ready to leave it, and I didn't care to spend much money on it, and never see it again.

This is a fine old city, and Ireland generally is a much more beautiful and attractive country than most people, who have not visited it, realize. I came over from England last autumn to travel through the most desirable parts, and also to do some snipe and woodcock shooting again before I got too old. The birds are plentiful and the season much later than at home, only ending the first of March. We only see snow on the

tops of the mountains and only frost enough during the winter to make a little thin ice on shallow ponds for a few days. It is a great country for cattle, sheep, pigs and horses and most of them live and thrive on the green pastures all the year round, with no other food. Many thousands are brought to the great cattle markets near the city every week and nearly nine hundred bulls alone were sold at the great annual sale here for three days about two weeks ago. About the last of this month we leave here for London, where we shall stay for a time and then move along to see some other attractive place, and that is the way we wander around. It seems a rather lazy life, but I did more hard work than anyone will ever know for nearly fifty years, and am not ashamed of loafing now. Still I always find plenty to do as there are so many places to see, and so many different types of humanity to study, and also so much to read.

Very sincerely yours,"
(Signed) W. B. MOORE.

Two Irishmen were discussing the grave illness of a friend for whom the doctors had given up hope.

Said the first: "Phwat's the matter wid him, anyway?"

"Gangrene," said the other.

Said the first. "The saints be praised for letting him die wid the roight color."

The Bulletin Library

THE Secretary of the Editorial Board of the BULLETIN of the Medical Society of Nova Scotia has done what he could to establish a collection of books and magazines that will be of value to The Medical Society. In this he has been fortunate in securing a valuable exchange list with many other medical publications of Colleges or other Associations.

Our readers will have already noticed that we have received medical volumes from several publishing houses, which we have very inefficiently reviewed from time to time. We have felt that this reviewing has not been as valuable to our profession as if it were done by some recognized authority in our Society. Yet outside aid is not forthcoming, or the Journal, or Book, does not return to the BULLETIN office.

Then there are those who advertize in our Journals and others who do not do so, but are publishing books of interest and value to many medical men in Nova Scotia. Quite a few of these come to the BULLETIN office.

We are in receipt of the International Clinics four volumes; The Transactions of the College of Physicians of Philadelphia; The Practical Medical Series (this year 8 volumes of from five to eight hundred pages); The Canadian Medical Directory; Bulletins of the New York Academy of Medicine and the Medical Society of the County of Kings, N. Y.; The Canadian Defence Quarterly; etc., etc.

Just recently we have added 2 volumes, "Four Centuries of Medical History in Canada" by Dr. Heagerty, published by MacMillan Company of Canada. Also Merck's Index, (fourth edition), being an Encyclopedia for the Chemist, Pharmacist and Physician. These latter we will review as soon as time and some effort will permit and space can be found in the BULLETIN.

This collection of books and magazines is bound to increase and the writer feels that some better library and office accommodation should be at once considered. Moreover, might it not be of some value to more members of the profession? May we have some suggestions?

S. L. WALKER.

OBITUARY

HAROLD HUNTER CORBIN, M.D.,C.M., Dalhousie 1923, Halifax, N. S.

UNEXPECTEDLY the call came to Dr. H. R. Corbin of Halifax and he passed away, April 18th, 1930, at the Victoria General Hospital, barely half an hour after he had been admitted. For two or three days he had some throat infection but was about the house even on Friday, serious symptoms not showing until the evening of his death.

Dr. Corbin was born in Halifax some thirty years ago, being a son of the late Everett Corbin and Mrs. Corbin. Besides his mother he is survived by an aunt Miss Minnie Corbin in the United States, and two uncles Judge Blois of the Juvenile Court and H. H. Blois, Principal of the Bloomfield school. He and his mother resided at 387 Quinpool Road, Halifax, Nova Scotia.

Dr. H. H. Corbin graduated in Medicine from Dalhousie University in 1923. He then accepted a position with the Royal Mail Steam Packet Company as Surgeon on the boat sailing from Halifax for South America. As he wished to specialize he went over to London, England, and entered the Royal Opthalmic Hospital (Moorfield's Eye Hospital) and after a few months was taken on the staff as Assistant to Sir William Lister, and was also on the staff of the Central London Ear, Nose and Throat Hospital. Dr. Corbin received Diplomas from both Hospitals and returned to Halifax, his home city, after an absence of two years, and opened office on Barrington St. as Eye, Ear, Nose and Throat Specialist.

He was not permitted to follow the even tenor of his way confining his activities to his professional duties. He was elected Alderman in Ward 4 in 1927 and was active and faithful in his discharge of his civic duties. He was appointed to the Board of Health of Halifax City automatically becoming its Chairman, and to the Board of School Commissioners. He was a member of the Halifax Branch of the Medical Society of Nova Scotia, of the Provincial Society and the Canadian Medical Association. He had well established himself in practice and would have undoubtedly become a successful specialist.

His funeral was almost a civic one, the Police Department, the Health Board, the Firemen, the Mayor and Aldermen, many members of the medical and legal professions, and the staff of Dalhousie, being present. Interment took place at Fairview Cemetery on the afternoon of April 21st.

To the lonely grief stricken mother the Medical Society of Nova Scotia extends sincere sympathy

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JAMES NORBERT LYONS, M.D., C.M., Dalhousie University, 1916, Halifax, N. S.

Dr. J. N. Lyons of Halifax, after less than three days illness, died of Septic Pneumonia following a facial infection, on April 19th, 1930,

at the Victoria General Hospital. A man of fine presence, giving an immediate impression of unusual physical vigor, he was kind and genial and highly esteemed by all who knew him. He brought to his practice a warm humanity as well as professional knowledge and skill. A large part of his work was freely given for those unable to compensate him.

A graduate from Dalhousie in 1916 he at once enlisted and going to England joined up with the R. A. M. C. serving efficiently in both Mesopotamia and India. Returning to England he spent a year and a half in Orthopedic Surgery in London. Upon his return to Canada he began practice in Halifax in 1920 and specialized to a considerable extent in Orthopedics. He was a lecturer at the Dalhousie Medical College and on the staff of the Dalhousie Health Clinic.

Dr. Lyons was a strong supporter of Medical Societies and was a Vice-President of the Halifax Branch of the Medical Society of Nova Scotia; an active member of the Provincial Society and was on the programme for the next annual meeting; also a member of the Canadian Medical Association. His funeral was held from his late residence, 22 Carleton Street, to St. Mary's Cathedral, thence to Mount Olivet Cemetery, the cortege being very large and representative, the attendance of medical men being very large. Dalhousie University of which, in his undergraduate days, he was a very popular student was also largely represented. Many members of the Royal Nova Scotia Yacht Squadron of which Dr. Lyons was an active member were in attendance. The floral tributes were many and beautiful.

Dr. Lyons was a son of the late James Norbert Lyons and Mrs. Lyons of Tower Road, Halifax, receiving his preliminary education at the Halifax Academy. He is survived by his wife and three young children, the third being but three weeks old at the time of his death. His widow was formerly Miss Frances Chisholm, a daughter of Mr. Justice Chisholm of Halifax. A sister, Sister Mary Raphael of the Community of the Sisters of Charity, a teacher in St. Patrick's Girls High School also survives; a brother died some years ago in the West. His mother feels his passing most keenly as she was lavish in her love for him.

To his sorrowing mother and sister and to his wife, so well known to a large circle of friends, with three children, the eldest not yet four years old, the Medical Society of Nova Scotia will extend sincere sympathy in the unexpected bereavement that has come to them.

AMEDEE RAYMOND MELANSON, M.D.,C.M., Dalhousie University, 1906, Eel Brook, Nova Scotia.

The death of Dr. A. R. Melanson of Eel Brook, Yarmouth County, Nova Scotia, occurred at the Yarmouth Hospital in the early morning of May 8th, 1930. He was ill for but a few days. The Yarmouth correspondent of the *Halifax Chronicle* writes as follows:—

"Dr. Melanson was the son of the late Mr. and Mrs. Raymond Melanson, of Corberrie, Digby County, and was in his 49th year. Upon getting the degree of M.D.,C.M. at Dalhousie Medical College in 1906, he went to Eel Brook to establish a practice and continued until his recent illness prevented active work.

He was a Liberal in politics and served Yarmouth County as a Member of the Provincial Legislature for a number of years. Dr. Melanson was a member of the Knights of Columbus, Les Artisans and L'Assomption Society.

His cheerful and sympathetic disposition endeared him to all with whom he came in contact and his passing will be keenly felt, not only by those of his immediate circle, but by the many friends he has made throughout the Province.

He is survived by his wife, who was Miss Julia Hamelin, of Three Rivers, Quebec, and four sons, Raymond, Flavein, Guy and Emile, all at home; Also eight brothers, Eler, Sifroid, Leo, Agno and Felix Melanson, all of Corb rrie, Digby County; Albert Melanson, Gilbert's Cove; Emarius Melanson of Plympton; Peter Melanson in the United States, and two sisters, Mrs. George Blinn, in Maine, and Mrs. Ralph Babine, Bangor, Maine."

To those members of the medical profession who met Dr. Melanson at Society meetings he was always the quiet unassuming gentleman with the typical politeness of his French ancestry. That he was all of this and more to those that knew him best in his native county was evidenced by his election to the Provincial Legislature, his prominence in all local organizations and his activity in the local Branch of the Medical Society of Nova Scotia.

To his widow, his immediate family and his near relatives the BULLETIN, on behalf of the members of the Medical Society of Nova Scotia, extends sincere sympathy.

There passed away April 22nd, 1930 at her home in Port Clyde, Nova Scotia, Mary A. beloved wife of Dr. James Douglas Densmore, at the advanced age of 83 years and 6 months. She leaves to mourn their loss her husband, Dr. Densmore, in recent years residing with his daughter in Manchester, N. H., three daughters residing in the U. S. A.; a son George at home and a son, Dr. J. D. Densmore Jr., resident physician at Port Clyde.

In 1928 Dr. Densmore, Sr., was elected to Honorary Membership in the Medical Society of Nova Scotia. On January 4th, 1930, Doctor and Mrs. Densmore had been married sixty years. The Medical Society extends to Dr. Densmore and members of his family sincere sympathy.

A well known and respected lady in the person of Mrs. Thomas Delehanty died suddenly at her home, South West Mabou, April 23rd, 1930. Dr. M. G. Tompkins of Dominion is a brother and Mrs.

Campbell, Port Hood, wife of Dr. P. S. Campbell of the Provincial Department of Health, is a sister of the deceased; to both of whom the BULLETIN extends sympathy.

Miss Mary Dechman, R.N., formerly of Amherst, Nova Scotia, died recently at Long Beach, California. Dr. A. A. Dechman of Bridgetown is a brother of the deceased.

There passed away at Middleton, Nova Scotia, on April 21st, 1930, Miss May L. Harding, a lady intimately acquainted with events and persons in the early days of Annapolis County. She lived a long and interesting life.

She was a daughter of Dr. Frederick Harding who practiced in Windsor before your time or mine, and was, incidentally, a charter member of the Medical Society of Nova Scotia. A brother of Miss Harding, also a Doctor Frederick Harding, practiced medicine in Middleton over 40 years ago. Miss Harding's mother was a daughter of Colonel Bayard, a distinguished United Empire Loyalist who came to Wilmot at the close of the Revolution and received a large grant of land from the Government.

Locals and Personals

DR. Dan McDonald, North Sydney, was recently one of a delegation from that town to interview the Federal Government at Ottawa.

Dr. E. M. MacDonald of Sydney observed a birthday recently and some of his friends presented him with a handsome set of pipes. We presume these pipes are of the quiet, soothing variety in contrast to some we have both seen and heard, particularly in Cape Breton.

Dr. Douglas MacDonald, Dalhousie 1929, who has been an interne in the Henry Ford Hospital, Detroit, for the past year, has been appointed resident interne for a further period of three years. He is a son of Mr. and Mrs. J. Ed. Macdonald of New Glasgow.

Please note the BULLETIN'S new address:—
Room 311, Roy Building, Halifax, N. S.

Dr. J. W. McLean of North Sydney is again President of the local Institute of the British Sailors' Society for the current year.

Miss Ruth E. MacKenzie, daughter of Dr. and Mrs. M. D. MacKenzie of Parrsboro, recently graduated in Dietetics from the Rhode Island Hospital, Providence, R. I. Miss MacKenzie was well qualified for this course having received her B.Sc., degree from Acadia University in 1929. We trust some Nova Scotia institution will secure her services.

Born. To Dr. A. E. Doull, Jr., and Mrs. Doull, at Grace Maternity Hospital, Halifax, May 3rd, 1930, a daughter. Grandfathers Dr. A. E. Doull, Halifax and Dr. J. W. McKay, New Glasgow, both young men carry their honors nobly.

Dr. J. J. O'Connell, a graduate of Dalhousie in 1905, for many years in practice in Curling, Newfoundland, recently gave an interesting address before the Corner Brook Local Council of the Knights of Columbus. His topic was "Medical Triumphs of the Great War." He noted in particular the progress made in combatting such diseases as Typhoid and Tetanus. In plain language he pointed out the use of toxins and antitoxins, paying tribute to Pasteur and Lister as pioneers making this progress possible. Dr. O'Connell thoroughly enjoys the BULLETIN of the Medical Society of Nova Scotia.

With serious and thoughtful manner, with a shining dome which cannot be attributed to age alone, an erstwhile redoubtable Dalhousie Foot-baller, gives lectures on Obstetrics to medical students at Dalhousie. It is said that to some extent he is apt to be absent minded and once or twice a lecture has been enlivened by some reminiscence of a memorable tackle or the scoring of a winning goal. However, all this, Dr. E. K. McLellan of Halifax well deserves a prominent place among "Dalhousie Athletes of Former Days," a series of articles featured for many months by the *Halifax Chronicle*. (Contributed).

Born. At Springhill, April 30, 1930, to Dr. and Mrs. R. R. Withrow, a daughter.

Medical men from Nova Scotia visiting New York will always be welcome at the New York Academy of Medicine. Its Library is open from 9 a. m. to 10.30 p. m. Stated and Section meetings are held practically every night in the week. A series of afternoon lectures is given each year, beginning in November. The Annual Graduate Fortnight is held in October each year. All meetings and lectures held at the Academy are open to the profession generally.

Dr. H. A. Grant of Neil's Harbor, Victoria County, spent a few days in April in Halifax. Like a good member of the Medical Society he called on the General Secretary for a little chat. He is in hopes that this season's Highway programme will open up the Switzerland of Nova Scotia to our summer tourists.

Dr. T. H. Meahan of Glace Bay has again been compelled to enter St. Joseph's Hospital. Dr. Whitman, Dalhousie 1927 of Dartmouth is acting as his locum tenens.

Dr. A. F. Miller of the Nova Scotia Sanatorium, Kentville, spent part of April visiting Upper Canadian and American Sanatoria and Infirmaries. This trip was to note the latest and best for use in planning the new Infirmary addition to the Kentville institution. Mrs. Miller accompanied the Doctor on this somewhat speedy trip.

We regretted to learn that Dr. C. L. MacMillan of Baddeck spent the early weeks in April a patient in the Victoria General Hospital He has, however, fully recovered and returned to his practice minus only an appendix.

Among the out of town examiners for the Prov. Medical Board in Halifax examining the graduating class of the Medical School at Dalhousie we met Dr. D. A. McLeod of Sydney, For the few days in the city the Doctor was accompanied by Mrs. McLeod. They were guests at the Lord Nelson Hotel.

Miss Ino Josepha Chisholm of Montreal, daughter of the late D. C. Chisholm of Antigonish was married at St. Ninian's Cathedral, Antigonish April 23rd, 1930 to Dr. E. M. R. Casey of the Montreal General Hospital resident staff. Doctor Casey is a son of Mr. and Mrs. Charles Casey of Middleton, N. B. The bride was given in marriage by her Godfather, Hon. Wm. Chisholm, K.C. Both bride and groom are graduates of St. Francis Xavier.

Dr. R. C. Zinck of Lunenburg spent the months of February and March of this year attending the McGill University Clinic. Mrs. Zinck accompanied the doctor and their stay was both pleasant and profitable.

Dr. W. F. McKinnon of Antigonish accompanied Mrs. McKinnon to Halifax owing to se fatal illness of Dr. J. N. Lyons, Mrs. Lyons (new Francis Chisholm) is a sister of Mrs. McKinnon.

Dr. John Rankine of Halifax was re-elected President at the recent annual meeting of the Lorne Aquatic Club.

The officers of the Medical Staff Society of the Sydney City Hospital are:—Dr. W. H. Rice, President; Dr. J. F. McAulay, Vice-President; Dr. H. D. Land, Secretary.

Dr. J. A. Curry, Whitney Pier, who had a short time ago returned to his practice from hospital after being laid up with Pleurisy, we regret to learn suffered a relapse and again became a patient in the City Hospital.