Psychiatric Contributions to the General Practice of Medicine

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PSYCHIATRY offers two types of information useful in the general practice of medicine—the first having to do with the general psychiatric principles which are important in dealing with any sort of medical case, and the second with the correct handling of distinct psychiatric entities which the general practitioner frequently meets with in his daily practice. It is under these two headings that I should like to discuss this topic.

The first heading leads naturally to a discussion of the general principles of psychiatry and what psychiatric facts apply to cases met with in the everyday practice of medicine. To many people, the mention of psychiatry immediately brings to mind the conventional conception of "insanity," including maniacal actions, destructive behavior, hopelessness and chronicity, and with a great deal of stigma attached to the patient and his family. This kind of psychiatry is a sort of mixture of mysticism and imprisonment, having little or no connection with general medicine. It is not with that kind of psychiatry that this article concerns itself. In contrast, present day psychiatry recognizes and treats the individual person who comes for help of some kind, believing that human difficulties may arise from various factors. These factors may be organic disorders, physiologic or endocrine changes, but as well as these facts of structure, there is a set of facts that concerns itself with the individual's personality make-up and his life situation in all its phases, including his work and marital adjustment, his successes and failures of the past and his hopes and fears of the future. It is in working with these facts of personality that the psychiatrist sees his sphere of usefulness, but he fully realizes the importance of the other facts and insists that the person dealing with personality must be a physician qualified to deal with any disorder which lies in the more organically determined set of facts. Likewise, he urges that, just as the general physician expects him to pay attention to organic conditions, the general physician must pay attention to these facts of the personality if he is to do adequate justice to his patient. In no case can the patient's personality be neglected with impunity—even a simple fracture may so complicate the life situation of the patient that the personal problems that arise are of more importance for the individual's well being than is the treatment of the original fracture. It is in working with these types of facts that the psychiatrist deals with the "mind" —we know of no mystical entity which we can lay our hands on and treat, but only the behavior of the individual as it expresses itself outwardly and in his own thoughts, opinions, attitudes and fears. We look on this as only one separate level of facts and one which is as accessible for treatment and as much the duty of the physician to treat as is the tuberculosis lesion in the lungs. With this outlook, psychiatry changes from being a specialty to a fundamental

of general practice, assuming a place alongside of anatomy, physiology, pathology, and therapy on one hand and representing a major clinical division of medicine on the other.

Psychiatry is the phase of medicine which deals with the pathology and therapy of the person in contrast to those branches of medicine dealing with the pathology and therapy of the individual organs—the heart, brain, kidneys, lungs, and so on. It is obvious that these two must be interrelated—that the psychiatrist cannot work without the contributions of general medicine, but neither can the medical man work without taking into account the findings of modern psychiatry.

It is in order to ask what are these findings that assume enough importance to justify consideration in every case that the physician is called upon to deal with. The first and foremost is the appreciation of the above viewpoint, namely, that one deals with a closely knit together organism that will not allow separation into distinct entities of body and mind, nor yet into individual organs. Each case is an individual and must be treated as such. This demands that when anybody gets sick, whatever he may suffer from, as well as closely inspecting his various organs, we must find out what the situation of the individual is at that particular moment, what his financial situation is, his economic situation, what his relations to his family are, and whether there are any particular problems in his life. Without such elementary information we cannot adequately do justice to the human being that comes for help. In some cases this information is much more essential than in others, and may comprise most of the important data. In this case the problem is largely of psychiatric interest, but in all cases there are facts of this kind that may very frequently demand attention if therapy is to be successful.

Having recognized that such a view of the patient as the above is necessary, then psychiatry has some suggestions as to how such an attitude should be put into actual practice. Facts of this kind can only be understood and ascertained through a study of the person's life history, starting with the circumstances of his childhood, his education, his work record, and his adult adjustment in the fields of self dependence, and the financial and family sphere. Along with this goes an enquiry into the normal personality make-up of the patient with particular enquiry as to what the assets and liabilities of his personality are. Psychiatry would urge greater appreciation of the fact that all men are not born equal, but that they differ in very important respects. In general people may be said to differ in intellectual capacity, in physique, and in emotional make-up or temperament. To estimate these capacities, we have tests of science and tests of life, and these latter can be amazingly informative if we but take advantage of our opportunities through the method of the life history examination.

With understanding of such behavior facts, what then! Science can do little or nothing to change intellectual endowments, can make minor changes in physique and temperament, but what we can do in a great many of these cases is to recognize their limitations ourselves, and give this knowledge to the patient and his environment so that he may comfortably live within his limitations, without shame and energy exhausting strivings. Educational and vocational processes can be directed more in keeping with what the individual is capable of doing.

Difficulties arising among such personality factors may express themselves in a number of ways:

1. The difficulties are frequently expressed through physical makeup and they come to the physician with somatic complaints of some kind. It is this mode of expression which is of primary interest to the general physician and which leads to the syndromes described in the second part of this paper.
2. They may be expressed largely through psychological function, by the so-called psychosis, or by lesser behavior disorders, particularly in children, e.g. bed wetting, disobedience, poor school performance.
3. By delinquency or other anti-social acts.

I would hasten to point out that the above distinction is artificial depending largely on the main point of focus and smacking a little of body-mind differentiation. It must be insisted on that every state of mind one is in, affects every cell of his body—if he is discontented, unhappy, fed up, depressed, one's physiology registers these emotional states—nutrition declines, metabolism slows up, gastric secretion diminishes, gastrointestinal motility is slowed up, menses become irregular and may cease. It is conservatively estimated that forty per cent of men and women with poor health have no abnormal physical findings associated with these complaints. We call them psychoneurotics. To tell these patients there is nothing wrong with them, is false. These complaints are just as real as if there were definite lesional pathology. Years ago one called them neurasthenics, placidly supposing that their diffuse eruption of symptoms were due to anemic nerve cells. Accordingly they were given rest cures, fattening diets, and trips to the country till the fact became so insistent that it had to be noticed that as soon as they returned to their own environments their symptoms returned also. To-day progressive medicine recognizes the fact that these patients are unconsciously making their bodies the scapegoats of all sorts of worries and strains—economic, domestic, and marital conflicts—conflicts of interpersonal relationships. It must be insisted on that so-called nerves in every case are the response of an individual organism to the stresses and strains of life—that the neurosis is the friction rub telling of inter and intra personal conflict just as the pleuritic friction rub tells of pleural pathology. Consequently, we have changed our tactics and are now spending a great deal of time trying to understand and help these people—to give them the opportunity for a frank and helpful review of their past, present, and future with a person who has had greater experience in dealing with such troublesome facts. More and more referral to a psychiatrist should bear this implication—that it is not for incarceration or name calling, but an opportunity to carefully work over and take stock of the life situation in which one finds oneself.

With this insistence that every case the practitioner sees must be treated in this all inclusive way (which is not really the property of the psychiatrist at all but which, of recent years, the psychiatrist has become the champion of, amidst the scientific advances of the various medical specialties), it may be said that there are special entities which are truly psychiatric in the sense that the disorder lies wholly within the realm of personality function with only secondary involvement of organ function, or that disturbance of organ function results in gross behavior change. The practising physician encounters

far too many such problems in his daily work to under-estimate their importance. In this latter part I shall confine myself to a few of the psychiatric illnesses which are most commonly encountered in the general practice of medicine.

Depression

Perhaps the most common of all psychiatric disorders is that of depression, by which we mean changes in mood varying from mere blues or sadness to the sweeping psychotic disorders—manic depressive psychosis, reactive depressions or involutional melancholias. Everyone has personal experience with slight downs in his mood and knows the fatigue, the lack of energy, and loss of spontaneity associated. In the abnormal mood swings these accompaniments go to greater lengths—the individual is slowed up in all his activities and thinking. He wants to be left alone, and is downhearted and miserable, interested in nothing. Of importance are the physiological accompaniments of such low moods—headache, indigestion, constipation, poor sleep (typically of the type where he goes to sleep early but wakes around four or five a.m.—the so-called early morning awakening), loss of appetite and weight, and often cessation of menses. Frequently these complaints bring the patient to the physician first, and if mood is not enquired into, mention of this more sweeping disturbance is never made. Most depressions admitted to psychopathic hospitals have had their misery increased by rigorous laboratory examinations to explain symptoms which were only the local expression of their emotional disorder. In contrast to the delirious and organic illnesses, which are to be discussed later, the patient's intellectual faculties are not disturbed, though they may suffer in the general slowing up process of the individual. There are often accompanying delusional ideas in keeping with the general self accusatory feelings of the patient. Often there are feelings of apprehension and marked tension and anxiety associated.

In discussing treatment, the most important consideration is that of suicide. It must be realized that such reactions have an extremely good prognosis in themselves, but the patient in his hopeless mood often determines to end it all and the physician must take the responsibility for prevention. Any patient with depressive tendencies should be regarded as a suicidal risk. Of 110 attempted suicides at the Phipps Clinic, it was found that 73% were depressive. Varying motivations were found—generally a feeling of frustration and failure. Fears of insanity were prominent, especially in cases in which there was a family history of mental illness. The frequency of depressions, suicides, and alcoholism in one family was given special mention by the author. The following danger signals are worth noting—the presence of delusions of persecution, definite ideas of self accusation and hopelessness for the future, and ideas of being a burden and not worth while bothering about. Often the suicidal attempt is preceded by a period of a day or so of lessening of the depression, the patient already having made up his mind that there is a way out. Most frequently, such attempts come in the convalescent period when the patient apparently is getting well, but then has a short relapse and thinks all his progress has been swept away. Previous attempts are to be regarded as serious warnings of such tendencies rather than prophylactics against repetition. Such conditions put a serious responsibility on the physician's shoulders when he also realizes that by too much restriction of the depressed patient's freedom,

especially in the convalescent period, he is prolonging the illness and perhaps indefinitely hindering the recovery. Dependency must be placed on the good rapport which he has previously established with his patient and on the physiological signs of sleep and weight gain, which cannot be simulated.

Having attended to the suicidal angle, the physician is ready to treat his patient. This is best accomplished in some protected environment where the annoyances and worries of everyday living can be excluded. Exhortations and arguments are especially to be avoided. During the depression psychotherapy consists of short interviews, mostly with reassurance concerning the eventual happy outcome and the bodily complaints which are part of the disorder. Attempts at discussion of deeper issues or the obtaining of confessions in this period does only harm. With the lifting of the mood, then topics of etiologic importance are introduced and constructive aid attempted. The patient's day must be planned for him with insistence of tasks that are well within his capacity. Important and demanding duties should be put off until the evenings, when he generally feels very much better. Decisions, such as selling property, divorce, etc., must be left until recovery from the depression, because during the illness the patient is often reacting to false values, the result of his illness. Formulas such as travel or rest cures are of little use. The patient carries his illness with him and the added strain of new adjustment to strange places does not help in recovery. Close attention must be given to physiologic considerations—the appetite, digestion, elimination, and sleep. Increasing the supply of vitamins, particularly the B complex, is sometimes of value. A warm soak in the tub at about body temperature for one to two hours in the evening may relieve tension and aid sleep. Sedatives, particularly the barbiturates frequently must be employed, particularly at night and occasionally throughout the day, but only with the full realization that this is temporary and therapy cannot be considered successful till the patient has been gotten off such medication and gets along under his own steam.

Of recent years, the modern shock therapies have been much used with considerable success in the treatment of affective reactions. They are most indicated in so-called rut depressions—where the condition has gone on for many months with little or no improvement and particularly in the older age group.

The decision as to when to hospitalize the patient is difficult. Many mild depressions are handled daily by office interviews all over the country. The physician must realize his responsibilities though, and insist on hospitalization when:

1. The danger of suicide becomes too great.
2. The patient's environment is not favorable to recovery.
3. Improvement is not occurring outside of hospital.
4. When the patient is a severe nursing problem requiring special attention, e.g. tube feedings.

Toxic Delirium

These are invariably disorders complicating other diseases and have received such names as "symptomatic psychosis" or "mental symptoms in somatic disease." They are dependent on intoxications by drugs and poisons, nutritional disturbances, circulatory and metabolic disorders. They are not mere incidents in the course of a more severe disorder, at the best they interfere

with adequate treatment and frequently pose certain problems and dangers in themselves. The delirious patient is one who is befuddled, disoriented, hearing threatening voices, misinterpreting the situation about him, filled with fear, and thus a constant danger to himself through his attempts to escape his imagined danger, or in his bewilderment inadvertently choosing a window to go out instead of the door.

Delirious reactions are characterized by:

1. Varying states of clouding of consciousness.
2. Partial or complete disorientation, leading to a state of bewilderment.
3. Dreamlike or nightmare-like experiences when awake, with a tendency to misinterpret the situation in keeping with the haziness and fearfulness.
4. Occurrence of vivid hallucinations and illusions of sight, hearing, tactile sensibility and position.
5. Restlessness.
6. Affect of fear and suspicion.

Etiologically they may be grouped as follows:

1. Those due to exogenous toxins or poisons such as alcohol, bromides, barbituates.
2. Those due to chronic states of malnutrition and deficiency, e.g. pellagra.
3. Those due to chronic cachetic states or exhaustive states, e.g., post operative.
4. Those due to metabolic disorders, e.g. uremia, hyperthyroidism.
5. Those occurring as part of an organic reaction, e.g. paresis or cerebral arteriosclerosis.

The onset of delirium is generally sudden, and often at night, but if careful observation is kept, it is usually possible to see a prodromal period in which the patient is increasingly restless, occasionally out of contact with the surroundings and perhaps a little suspicious and fearful. This pictureprogresses to the full fledged delirium described.

From the etiological factors it can be seen that these conditions must occur and often be handled in general medical practice. Specific therapeutic measures will be directed by the type of infection or poisoning which is at the root of the psychosis. However, certain general principles are applicable in the majority of cases:

1. Careful eliminative procedures are fundamental. These include catharsis, attention to intake and output of fluid and promotion of elimination by the skin.
2. Foci of infection must be controlled and eliminated.
3. The efficiency of the circulation and respiratory functions of the brain must be attended to.
4. If cerebral edema is present, spinal puncture is of value and the cautious administration of hypertonic solutions intravenously, e.g., 5% saline or 50% glucose.
5. Sedation is important and essential but the physician must have full appreciation of its dangers. Hydrotherapy and chemical sedation are the types used. The continuous or neutral tub at a temperature of 98-99 degrees Far. is of utmost value and may be used for long periods of time, depending on the effects desired and the patient's

physical condition. With the proper use of hydrotherapy, it is often possible to dispense with the use of drugs, and thus with an added possible toxic factor. It is unfortunate that in the general hospital, where so many delria are treated, there are rarely facilities for hydrotherapy, and it becomes necessary to rely on drugs. Hypnotic drugs should be saved for the night when the patient is apt to be much noisier than during the day. A quickly acting, rapidly metabolized drug is best, such as paraldehyde or sodium amytal. Drugs must be given in large enough doses to cause sleep and should be given before darkness falls, when the patient's confusion and puzzlement is increased.

6. Large doses of vitamins are of value, particularly of the B. group. Thiamin Chloride (10-30 mgm.) and Nicotinic acid (50-300 mgms.) should be given by mouth or parenterally.
7. Nursing care is of the utmost importance. A delirious patient needs constant and alert observation that he does not harm himself in his fear or that in his bewilderment he does not injure himself by mistake By and large, the prognosis is good in delirium and it is unfortunate that cases fail to recover because of avoidable accidents. As well as this, the patient must be continually reassured concerning the intentions of the nurse or physician, particularly when some involved procedure, easily open to misinterpretation, such as intravenous therapy, is being carried out. Such procedures must always be explained to the patient and carried out in full light. The principle of full light goes further and the increase in fear and confusion by semi-lighted rooms should be avoided. Nurses are of particular importance at night, and the day nurse should always be the first one discharged.
8. The talk of the delirious patient should be recorded as it may be of immense value in personality reconstruction, which should come after recovery from the acute episode. Such personality work is particularly essential if the delirium of alcohol and drug addiction is not to recurr.
9. A prolonged period of convalescence is necessary in all cases and too early resumption of responsibility may easily re-precipitate the delirium.
10. Prevention is mentioned last, but should occupy first place in the medical man's thoughts. Surgeons in particular have the opportunity to take steps to avoid delirium. Two are of great importance—the avoidance of unnecessary and unwise administration of drugs, and the consideration of emotional factors involved in the contemplated operation. Dr. J. M. T. Finney has pointed out this need when he stated that fear, physical discomfort and pain, loss of consciousness, loss of time from one's regular occupation, may all combine "to cause the prospective patient many anxious moments and, in certain cases, such an acute state of nervous shock and mental distress as seriously to affect the outcome of the operation."

Organic Reaction Types

Among the many psychiatric problems which the general practitioner sees, this type is perhaps most frequent and best understood. They are caused by a definite organic lesion, generally of the cerebral cortex with resulting personality changes. In general there are chronic, more or less permanent,

focal or diffuse changes in the central nervous system. The most common etiological factors are:

1. Syphilis
2. Alcohol
3. Arteriosclerosis
4. Senility
5. Trauma
6. Primary organic nervous diseases, such as neoplasm, encephalitis, or meningitis.

Naturally the clinical picture varies from case to case, but there are certain characteristic features of organic brain disease whatever may be the etiology.

1. A definite organic change exists somewhere in the central nervous system, which may be in the nature of nutritional disturbance, neoplasm, inflammation, or degeneration. This frequently leads to neurological signs and particularly often to changes in the speech, writing, and equilibrium. Special procedures, such as lumbar puncture, or encephalography are of particular value in diagnosis.
2. Personality changes are striking and are generally manifest by changes in the individual's ethical values and judgments completely out of keeping with his previous history of a successful life. At times, however, symptoms represent an exaggeration of normal personality responses, e.g., senile patients who have always looked on the dark side of things become depressed.
3. The mood is characteristically labile, with marked fluctuations from happiness or joy to sorrow or anger, without adequate accounting circumstances.
4. Mental changes are characteristic, resulting in deterioration of business and intellectual efficacy. There are characteristically defects in memory and judgment. These patients are frequently excellent bluffers and may cover up such defects unless they are adequately tested.
5. The prognosis varies but in general is poor, there being a steady down hill path. However, many such reactions are entirely preventible or, if diagnosed in their early stages, capable of being stopped. This is particularly true of cerebro spinal syphilis in all its forms and it is the responsibility of all physicians dealing with such patients to be always on the alert for such a development. Early changes can only be recognized by routine spinal punctures, neurological and mental status examinations.

Anxiety States

Hecker in 1893 first described the group of symptoms composing the so-called anxiety states, but little attention was paid until the last war, when they were brought to prominence by the frequency of such conditions variously labelled soldiers heart, D.A.H., neurocirculatory asthenia, effort syndrome, or functional cardiovascular disease.

The clinical picture varies in number, character, and intensity of symptoms from case to case. The anxiety may be part of a sweeping psychotic reaction, it may be a concomitant of organic brain disease such as trauma or arteriosclerosis, or it may be associated with, though not caused by, physical disease such as tuberculosis, diabetes, or pernicious anemia. It always occurs in an

individual inclined to be tense and uneasy with sudden punched out attacks of palpitation, praecordial distress, perspiration, difficulty in breathing, weakness, giddiness, and even fainting associated with a fear of impending danger or death. The attack may last a few minutes to an hour. There may be a story of constant tenseness, uneasiness, easy fatigue, and perhaps anxious dreams. Direct examination reveals ordinarily a tense, restless, uneasy, apprehensive person with cold clammy hands and feet, dry mouth, and labile pulse and blood pressure which is normal when the patient is asleep. In the heart there are frequently extrasystoles, the reflexes are hyperactive. If enquired into there is generally some discoverable setting for the attack and background to the whole picture. It is easy to misdiagnose such a condition as disease of any of a number of organs, particularly the heart and thyroid, but if anxiety is kept in mind fewer mistakes will be made.

Treatment demands thorough physical investigation and satisfying oneself that there is not organic disease to account for the symptoms. That being excluded, personality and situational factors must be found to support the diagnosis and this can only be done by a complete life survey. True this is time consuming, but does not balance badly against time and expense of further attempts at treatment with glandular and sedative medications, to which these patients are often submitted. Once having made the diagnosis, the physician must have the courage of his convictions and not give the frequently conflicting advice—"Better take it easy for a little while," or "There is nothing wrong with your heart but you can take these pills." Patients are quick to pick up such inconsistencies, and to have all their confidence thus dissipated. Treatment consists in explaining the condition in terms of physiological reactions to the etiological factors found and making any possible improvements in these.

With adequate examination and explanation, the majority of patients will be able to see the nature of their illness and be reassured that their complaints have an actual basis, that they are not imaginary and that they do not lead to insanity. With these fears set at rest, they will stop concentrating on physiological feelings and concentrate on more basic personality and life factors. Frequently such factors can be modified but often the patient must be taught to accept inevitable handicaps and disappointments.

Sedatives, such as small doses of Barbital, are of use as crutches but only as that, and treatment is not completed as long as the patient still needs such crutches.

Anxiety states are eminently treatable and with such simple measures as these, many can be restored to comfort and efficiency in a short time. Too often all attention is focused on the physical complaint which they present, with complete disregard of the person function. After years of conflicting medical advice and treatment, they form real problems that rarely can be won from their life of chronic invalidism.

Summary

In this paper an attempt has been made to state the contribution of modern psychiatry of most value for the general physician to have in mind in his everyday practice. In general this may be stated as the recognition by the doctor that he treats a patient as a human being, with different assets, liabilities, and life experiences, and not as a defective machine. With

this attitude, the individual physician will render greater services to his patients. The four most frequent types of psychiatric disorders met in general practice have been described and their treatment outlined.

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Anent Pronunciation of Medical Words*

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THIS concerns not what is said, but how it is said. The former certainly is the more important; but the latter, if improperly executed, distracts one's attention—as an otherwise perfect piano rendition may be marred by one discordant note.

In attending medical meetings, the writer has become impressed with what appears to be a surprising disregard by the average doctor for the correct pronunciation of commonly used medical and scientific words. A presentation may be so interesting and illuminating—the listener so absorbed by what he hears—that he never once is aware he listens to "words." Instead, pictures and thoughts reach his sensorium, and he is attentive and comprehending. But let the speaker say *exze'ma* instead of *ec'zema*, and immediately the listener's attention is diverted. So far as we are concerned, fully two sentences must pass unheard, while we wonder why the gentleman didn't bother to learn the correct pronunciation for the word. Moreover, the prestige of the speaker as an authority is, from that point on, in jeopardy. It seems foolish and quite unnecessary to lose one's audience for a reason so easily avoidable.

CAUSES OF MISPRONUNCIATION

Several explanations suggest themselves as possible causes of mispronunciation: indifference, ignorance, and common usage. The last mentioned is probably the most important; and, when this is the cause, even a visit to the dictionary may be of but little help in giving an answer. One may find the correct form together with two or three others dictated by common usage alone. Consider, for example, the word "gynecology." One must choose from among three or four pronunciations, all apparently acceptable. Such disorder no doubt contributes to mispronunciation.

In the matter of indifference, incorrect pronunciation frequently arises from slovenly enunciation. For example, speakers often say *lab'-ra-to-ry* with four syllables, while the word has five and should be pronounced *lab'-o-ra-to-ry*.

The term "correct pronunciation" is not entirely self-explanatory, and doubtless many who use the expression would be unable clearly to define it. Probably it would be safe to say, however, that any given word is pronounced correctly if used in one particular form by a sufficient number of cultivated speakers. Under such conditions an acceptable standard of correct pronunciation may be said to be that which is in common use by cultured and educated people to whom the language is vernacular.

In scientific and medical speech, as in every-day English, styles of pronunciation change. Some members of the old school still say *gooms* instead of *gums*, and *wownd* instead of *wound*. Others still use the suffix *-etis*

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rather than *-itis*: appendi-*cetis*, tonsill-*etis*, ar-*thretis*, and so on. At one time such pronunciations were acceptable; now they are simply conspicuous.

In attempting to find an authoritative source of information on correct pronunciation, it soon became evident that, for scientific words, there is no large exhaustive work such as there is for ordinary English. Therefore, for the purposes of this discussion, the standard medical dictionaries are presumed to be authorities, together with the standard general dictionaries in some instances. For the most part these are in close agreement with each other. As a rule, where several pronunciations are in common use, each is given, and if one is more desirable, it is so stated.

Group Division of Mispronounced Words

Words commonly mispronounced may be divided, for convenience, into two groups; those over which there is general agreement among authorities on one pronunciation, and those which have two or more acceptable forms, one or another of which might be stated to be preferable.

In the first group we find such words as the following. How would you pronounce them?

adult	ramus	maxilla
research	nomenclature	axilla
cocci	trichomonas	protein
chiropodist	duodenum	discharge
abdomen	ouabain	epiphyseal
autopsy	endocrine	

All of us have heard one or more of these words mispronounced. Indeed, it is likely that not one physician in a hundred pronounces all of them correctly. Yet the dictionaries agree on but one correct form:

a-dult′
re-search′
cok′-si (not cok′-ki)
ki-ropodist (not sheer-opodist)
abdo′-men (not ab′-domen)
au′-topsy (the first syllable is definitely accented)
ray′-mus (the *a* is long as in *date*)
no′-menclature (not nomen′-clature)
trikom′-onas (the accent is on the second syllable—believe it or not)
duode′-num (not duod′-enum)
wah′-bah-in (three syllables, not two)
en′-docrine (not en′-docrene)
Maxil′-la (not max′-illa)
axil′-la (not ax′-illa)
pro′-te-in (three syllables, not two)
dis-charge′ (not dis′-charge)
epifiz′-eal (not epifi-se′-al)

Some Medical Words Frequenty Used

There is an interesting group of words that we use often in our daily conversation which is made up principally of proper names. Included in this group are Wassermann, Weil, Widal, Wertheim, and so on. The question arises as to whether these names should be pronounced as the Germans

pronounce them, or if they may be properly regarded as having become Anglicized. Should one say *Wassermann* or *Vahsermahn*, *Wile* or *Vile*, *Wedal* or *Vedal*, *Wertheim* or *Vertheim*? It is seldom one hears a doctor use the German form and yet, somehow, it seems proper to do so. No musician in speaking of Wagner would think of saying anything save *Vaghner*. Why shouldn't we do the same with the others? Yet, if we are to be guided by common usage, we should drop the German form.

A group of related words commonly mispronounced is that which identifies the barbituric acid derivatives, including the many proprietaries which belong to that family of drugs: barbital, phenobarbital, nembutal, amytal, seconal, etc. It is in the last syllable that mispronunciations occur. As in the case of Widal, the final *al* has the same sound as the first syllable in *tallow*, not as it sounds in the word *tall*. But here again we are criticizing wide-spread usage. In fact, correctness in the use of these words would likely disconcert a listener for the reason that, to the majority of an audience, the words apparently would be mispronounced; the bizarre is arresting whether it be correct or incorrect.

Alternative Pronunciations

There are a few commonly used words for which the dictionaries give more than one acceptable form of pronunciation. Such a word is "gynecology." Stedman, in his 1928 edition, pronounced it *ji-*, with the *i* long as in pine, while the present 1939 edition changes to a short *i*, as in pin. Dorland conforms to the latter, while both agree on the *j* sound rather than a hard *g*. Webster allows for both the long and short *i*, and adds a third, *gi-*, the hard *g* and the long *i*. And finally, common usage provides for a fourth—the hard *g* and the short *i*. Dr. Morris Fishbein, in his fascinating little book, *Doctors and Specialists*, which so cleverly caricatures the medical profession, expresses it thusly: "The worst thing about the gynecologist is pronunciation. He is pronounced variously, *gyne*, *ginni*, *jyni*, and *jinni*, any of which is right or wrong, depending on how he happens to feel that day." The writer is inclined to subscribe to this viewpoint.

"Iodine" is another word over which there is no complete agreement. The last syllable may be *-din*, *-dine*, or *-dene*. Stedman gives the last two. Dorland gives but one form, *-din*. Webster accepts all three, but states that among chemists the preferred form is *-dene*.

"Cadaver" in both Stedman and Dorland has a short *a* in the second syllable, as in *have*, while Webster gives both the long and short *a* as correct. It has seemed to the writer that most doctors use the short *a*. "Hygiene" has more than one correct form. One authority says *hi'-gene* while another says *hi'-ge-ene* with three syllables. "Calamine" may be pronounced with either a long or a short *i*.

Stedman pronounces "respiratory" with the second syllable accented thus: *respi'-ratory*. Webster prefers this, but lists as a second choice, *res'-pira-tory*. Dorland gives but one form, *res'-pira-tory*. In this particular instance, it is strange that any pronunciation but that used by Stedman is

accepted when one considers a similar word, *expiratory*, over which there is no disagreement by any dictionary. All agree the accent is on the second syllable. Both words have the same Latin derivation; so that if *expi'-ratory* is correct, then *respi'-ratory* also is correct.

Other Examples

Following are some additional words commonly mispronounced, but which have only one correct form:

	Don't Say	*Say*
angina	angi' na	an' gina
ascaris	ascar' is	as' caris
raphe	ra phe'	ra' phe
umbilicus	umbil' icus	umbili' cus
tricophyton	tricophy' ton	tricoph' yton
acetyl	ase' tyl	as' etyl
foramen	forah' men (short *a*)	fora' men (long *a*)
foramen	forah'-men (short *a*)	fora'-men (long *a*)
prosthesis	prosthe'-sis	pros'-thesis
tinnitus	tin'-itus	tini'-tus
eustachian	eustash'-ian	eustak'-ian
vitiligo	vitile'-go	vitili'-go (long *i*)
proteid	pro'-teid	pro'-te-id
rigor	rig'-or	ri'-gor (long *i*)
opisthotonos	opisthoton'-us	opisthot'-onos
cerebral	cere'-bral	cer'-ebral
caffeine	caf'-eine	ca'-fe-ene (three syllables)
paresis	pare'-sis	par'-esis
data	datta	da'-ta (long *a*)
status	stattus	sta'-tus (long *a*)

In Conclusion

The writer feels that the correct pronunciation of words is not of so great importance if an incorrect form is in common use. For example: caffeine, trichomonas, the barbitals, and the German proper names. One is then apt to pay but little attention to it. But it is definitely disconcerting to the average listener when such words as eczema, abdomen, umbilicus, adult, research, and so on are mispronounced.

The use of scientific words is essential in the discussion of medical subjects. Such words are our language, just as surely as are any other. We are among the most highly educated of all classes of men and women. My plea is that we take as much care with our medical language as we do with our ordinary speech—nay, a little more!

Coronary Thrombosis*

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TO Doctor James Bryon Herrick of Chicago, must be given the credit of making the medical profession recognize the importance of coronary thrombosis as a clinical entity. In 1912, the *Journal of the American Medical Association* published his classical account of this condition in a paper entitled "Clinical Features of Sudden Obstruction of the Coronary Arteries." Besides giving to the medical world by far the best extant description of this disease, Herrick showed that sudden obstruction of a coronary artery is not necessarily fatal. It is of significance to note, in this connection, that in January, 1939, Herrick pointed out in an article in the *Annals of Medical History*, that Robert Adams about 100 years ago came very close to the discovery of coronary thrombosis. Adam Hammer described the first case of coronary thrombosis with correct diagnosis ante mortem in 1878, and the first completed description of the disease was published in 1910 by Obrastzow and Straschesko.

Under a number of circumstances, both the peripheral circulatory apparatus and the heart are damaged, with the result that the venous return is lessened at the same time that the functional capacity of the heart is decreased. Outstanding examples of such a state of affairs occur in coronary thrombosis, pulmonary embolism and various acute infections. Variegated clinical pictures result from the admixture of features of shock and of heart failure, the differentiation of which is of the highest significance for therapy.

Before entering into the clinical manifestations of coronary thrombosis, it might be in order to briefly review the anatomical and physiological features of the coronary arteries and their circulation which have an important bearing upon the pathological conditions of these arteries, as they affect not only the cardio-vascular apparatus, but above all the span of life for the human organism.

Anatomy and Physiology

The heart muscle is supplied by the two coronary arteries. The right coronary artery arises from the anterior aortic sinus. It passes at first between the root of the pulmonary artery and the right auricula and then runs downwards and to the right in the right portion of the coronary sulcus, to the junction of the right and inferior margins of the heart. Here it turns to the left and runs on the back of the heart, as far as the posterior longitudinal sulcus; under the name of the posterior descending branch it proceeds down in this sulcus, towards the apex of the heart, and anastomoses with the anterior descending branch of the left coronary artery. The right coronary artery gives off a large marginal branch which follows the acute margin of the heart towards the apex, and ramifies on both surfaces of the right ventricle. It also supplies branches to the right atrium and to the part of the left ventricle which adjoins the posterior longitudinal sulcus.

The left coronary artery, larger than the right, arises from the left posterior aortic sinus and, after a short forward course between the pulmonary artery and the left auricula, divides into an anterior descending and a circumflex

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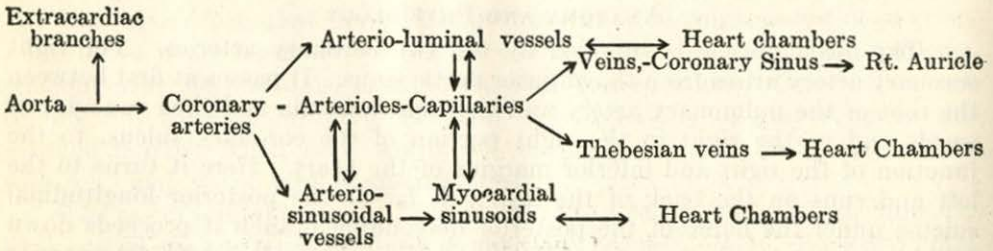
branch. The anterior descending branch runs forward between the pulmonary artery and the left auricula, and reaching the anterior longitudinal sulcus, descends in it to the incisura apicis cordis; it gives branches to both ventricles. In many subjects it turns round the apex of the heart and ascends for a varying distance in the posterior longitudinal sulcus. The circumflex branch follows the left part of the coronary sulcus, running first to the left margin of the heart; then turns to the right and accompanies the coronary sinus nearly as far as the posterior longitudinal sulcus; it gives branches to the left atrium and ventricle, and anastomoses with the right coronary artery.

Gross believed that the left coronary develops more extensive anastomosis and its branches supply increasingly greater territories with greater number of tributaries as the individual becomes older. This preponderance of left coronary blood vessels may be a morphological compensation for gradually developing fibrotic changes. According to Gross considerable modification in vascularization of different areas occurs as age advances, while this is certainly true as a consequence of disease. The vascular supply to the right side of the heart steadily diminishes as the individual becomes older.

The intramural branches of the coronary arteries subdivide repeatedly and form extensive capillary plexuses around the muscle elements. The endothelial cells of these capillaries appear also to form the boundaries of lymph channels which ultimately drain into a subepicardial network of lymphatics.

In addition to the interarterial anastomoses of both coronaries, three subsidiary systems of arterial anastomoses exist:—(1) an extensive anastomosis between the coronary branches and extra-cardiac branches of the aorta, particularly at the site of the pericardial reflection around the ostia of the large veins, (2) arterio-luminal vessels running directly from the coronary arteries into the cavities of the heart and (3) arterio-sinusoidal vessels communicating with ventricular cavities by means of myocardial sinusoids. Anatomical studies thus open the possibility that blood can travel as shown in the following diagrammatic fashion:



Blood entering the coronary arteries, therefore, has a possible exit through any one or all of four routes: (1) By extracardiac anastomoses; (2) By way of the capillaries and veins (a) Into the coronary sinus or great cardiac veins and thence into the right atrium, or (b) Through the Thebesian veins into the heart chambers; (3) By way of the "arterio-luminal" vessels directly into the heart chambers; and (4) By way of the "arterio-sinusoidal" vessels through the "myocardial sinusoids" into the chambers.

It cannot be doubted that these different systems can develop extensively and serve as auxiliary avenues for maintaining nutrition of the myocardium

when the lumen of coronary vessels is gradually reduced or even obliterated by slow sclerotic processes. Evidence at present available makes it questionable, however, whether they compensate sufficiently to maintain normal action during abrupt occlusion of a main coronary vessel.

The blood passing through the extensive network of capillaries is collected by larger veins and eventually returned to the cavities of the right heart by three systems of veins, viz., (a) the large coronary vein ending as an ampullar sinus which opens into the right auricle, (b) smaller accessory veins which open into the right auricle separately and (c) Thebesian veins communicating with all cavities of the heart directly. These separate communications provide a factor of safety insuring escape of venous blood in the event of occlusion of the coronary sinus.

Experimentally it has been shown that the coronary blood flow is about 150 to 225 cc. per minute in a heart weighing 300 grams, (50 to 75 cc. per 100 grams per minute). With accepted cardiac outputs of 3 to 4.5 liters per minute it can be calculated that about 5 per cent of the total cardiac output flows through the coronary arteries. Calculations show that the normal flow must increase at least three-fold during strenuous exercise, but that the proportion of the total output so deflected becomes less. This would mean that the increase in oxygen consumption must greatly exceed provisions for flow compensation and make it understandable why a patient with sclerosed vessels so easily develops anoxemia of heart muscle and anginal symptoms on exertion.

The blood supply of the heart must be rapidly adapted to its greatly varying needs. Three distinct views exist as to the manner in which such adaptation can be brought about. According to one view, the coronary blood flow is controlled only passively by the head of pressure in the aorta; increase in heart-rate in systolic discharge or in the effort of contraction due to high peripheral resistance can improve coronary flow only by increasing aortic pressure. According to a second view, a mechanical massaging action and changes in caliber of coronary vessels through chemical consequences of altered metabolism is stressed. According to a third view compensatory changes in blood flow are predominantly due to reflex vasomotor action.

The coronary vessels are richly supplied with nerve fibers down to the smallest arterioles, from both the vagus and sympathetic system, but the vagal fibers alone appear to terminate on the smallest vessels. The preponderance of experimental evidence indicates that the vasoconstrictor fibers are carried chiefly in the vagus trunk and the dilator fibers in the sympathetic chain.

Evidence exists that through these nervous influences, the coronary flow can be modified independently of aortic pressure changes and consonant with the needs of the heart. Increased cardiac output in innervated hearts is accompanied by increased venous outflow when arterial pressures remain constant. The afferent impulses appear to travel over vagus branches supplying the auricles, aorta and perhaps the pericardium.

The tone of coronary vessels is affected, in addition, by physical and chemical changes of the blood, many of them direct consequences of altered metabolism. Thus anoxemia, hypercapnia and acidosis cause relaxation of coronary vessels by direct action, but owing to a dominant central action, on the vasomotor centre, the affects of a general increase seems to be a constriction.

Pathology

The clinical symptoms of coronary thrombosis are due to the production of an infarct, an anemic necrosis of the heart muscle caused by arterio-sclerotic occlusion, of one of the main branches of the coronaries with thrombosis. The condition of the aorta is very variable. It may show the most advanced atheroma, or may appear practically normal.

Although coronary thrombosis and infarction of the heart are generally spoken of in the same breath as if they were one and the same thing, ischemic necrosis may be found without any thrombosis. In such cases there is merely an extreme degree of narrowing of the vessel. This condition is by no means infrequent and should be stressed. Occlusion of the coronary vessels may, indeed, be produced in four different ways: (1) Arteriosclerotic narrowing of the vessel; (2) thrombosis; (3) Syphilitic aortitis at the root of the aorta, sealing the mouths of the coronaries; (4) embolism by vegetations from an acute endocarditis, a rare occurrence.

Although numerous anastomoses exist between the branches of the coronary vessels, yet the ever-acting heart demands such an enormous blood supply that from the physiological standpoint they must be regarded as end-arteries. The sudden obstruction brought about by thrombosis will, therefore, result in the production of a white infarct. As the vessel most frequently affected is the descending branch of the left coronary artery, it follows that the lesions are most often found in the anterior wall of the left ventricle toward the apex and in the interventricular septum. The infarcted area is irregular in shape, of a white or yellowish color and is often surrounded by a red zone. Although usually a firm consistency, the larger areas may soften and break down into a granular material into which hemorrhage may occur, so that the affected area becomes deep red in color. This condition of softening is known as myomalacia of the heart. In such a case rupture of the heart wall may occur without the previous formation of an aneurism. When the endocardial surface is involved, a thrombus is deposited on the affected area from which emboli may arise. Thus a right-sided lesion may be followed by pulmonary infarction, a point of diagnostic value. When the lesion extends to the external surface a varying degree of pericarditis is present. The weakening of the heart wall, especially when the patient survives for some time, may lead to a bulging and the formation of a ventricular aneurism which in time may rupture, resulting in sudden death. The larger the infarcted area the greater will be the tendency to aneurism formation.

The microscopic picture naturally varies with the duration of the lesion. If death is instantaneous, there may be nothing to see in the heart. In those cases which survive for a few hours the muscle fibers show acute necrosis with swelling, granulation, loss of striation and marked shrinking of the nuclei. The necrotic tissue is soon invaded by great numbers of polymorphonuclear leucocytes, so that in some cases the appearance of an abscess may be suggested, thus accounting for the leucocytosis observed during life. If the patient survives for some time the dead muscle gradually becomes replaced, first by a loose, soft granulation tissue rich in small blood vessels and later by dense fully-formed scar tissue. The presence of scars must not, however, be regarded as indubitable evidence of previous infarction, for similar scarring may be caused either by gradual cutting off of the blood supply to an area of myo-

cardium through narrowing of the coronaries, or as the end-result of inflammatory or toxic focal necrosis. It is difficult to predict the exact effect upon the heart of this myocardial scarring. Small scars probably produce no effect. If the area is large, there may be permanent myocardial insufficiency, dilatation of the heart, or the formation of a true aneurism.

Clinical Picture

One of the reasons why myocardial infarction presents itself under so many guises is that it may induce various and totally dissimilar types of circulatory failure. Most remarkable among these is peripheral circulatory failure, with a clinical picture almost identical with that of traumatic shock, and paradoxically enough with little or no evidence of cardiac insufficiency despite the fact that the causative lesion involves the heart. But even in these, careful observation reveals the admixture, more or less prominent, of shock. It is this predominance or co-existence of shock that differentiates the circulatory failure of myocardial infarction from that of other diseases of the heart.

Typical shock with little or no evidence of heart failure is most apt to occur in the first days of initial attacks of coronary thrombosis, affecting individuals who have previously had slight or no symptoms of cardiac insufficiency, although they may have had angina pectoris. In these patients, shock very commonly dominates the picture only during the first days after the occlusion; it then lessens and, unless improvement occurs, is replaced by symptoms of heart failure. On the other hand, when coronary thrombosis implicates a previously insufficient heart, manifestations of heart failure are apt to predominate over those of shock from the very start.

Shock may occur almost simultaneously with the pain that marks the occlusion. In other cases, peripheral circulatory failure first appears hours or even days after the closure. It is the cases of myocardial infarction with abdominal pain and simultaneous shock that may be mistaken for an acute surgical abdomen. One should bear in mind that there are exceptional instances of myocardial infarction with little or no pain in which the picture is dominated by shock. Indeed, according to Libman, shock is more apt to occur in hyposensitive individuals who experience little pain with the attack.

Pain. When the pain comes it may be slight and may remain so; more often it rises rapidly to its culminating point and usually from then on is severe, often agonising; it is a continuous pain in the sense that it is unfluctuating. It is gripping or burning in quality; generally it starts over the sternum; it may remain there or it becomes more diffuse as it strengthens and spreads to involve the left or right or both arms, but especially the left, or to the neck and jaw, or to the interscapular region, or to the abdomen. The lower sternum or the epigastrium is more frequently the starting-point than in angina of effort. During the period of pain, the patient may rest immobile, but frequently shows agitation and is restless or rolling about in agony; unlike the pain in the angina of effort, movement does not seem to increase it appreciably. Though its duration varies, the pain is characteristically long-lasting, a feature which renders the malady so distressing. It lasts usually for one or more hours at its height, and declines gradually over a long period of many hours or several days.

In addition to the pain, nausea, weakness, vomiting and thirst are common complaints. A restlessness and exitement often develop, and on rare occasions progresses to delirium. The mind is generally clear. The patient most often

can lie flat in bed without orthopnea, although he may complain of dyspnea and breathe fast and superficially. The absence of orthopnea is in contrast to what occurs in the cases with heart failure. The skin is pale and clammy; the perspiration may be so profuse as to soak the clothing. The features are often sunken. The face and hands often exhibit a grayish cyanosis that may lead to suspicion of the diagnosis at the first glance. Patches of irregular bluish-red mottling (cutis marmorata) may be present. The hands and feet are cold, especially, as emphasized by Levine, in contrast, with the rectal temperature which is generally elevated.

The heart is not enlarged above the dimensions prior to the occlusion. The rate is rapid, apart from the unusual instances of heart block, which generally present the picture of cardiac failure more than of shock. The heart sounds generally seem distant. However, the most common auscultatory finding is gallop rhythm, which is present at one time or another in almost all cases and often suffices for immediate differentiation from gall-stone colic or other confusing conditions. Extrasystoles, auricular fibrillation, auricular flutter, nodal rhythm and other arrhythmias may occur, as well as the pericardial rub that can be heard at one time or another in perhaps one-quarter of the cases as reported by Levine in his monograph.

During the stage of shock, physical and roentgen examination of the lungs reveal little that is abnormal. With the appearance of heart failure, pulmonary blood flow is retarded and symptoms and physical signs of pulmonary engorgement quickly make their appearance. The susceptibility of patients with myocardial infarction to bronchopneumonia is well known, but this dreaded complication usually does not appear until heart failure becomes manifest.

The pulse is small and rapid. Arterial pressure falls sharply from its previous level in the majority of cases. If, as is often the case, hypertension was previously present, the tension may still be above the normal. The height of the blood pressure is of considerable prognostic importance; sharp fall in tension is of serious omen, and the outlook is grave when the systolic pressure falls below 80 mm.

The superficial veins are collapsed and the venous pressure is low. Peripheral edema is absent. There is no enlargement of the liver, unless heart failure is present. Upper abdominal pain, tenderness and rigidity may be present and are reflex manifestations of the cardiac lesion and perhaps sometimes correlated with pericarditis. The most common abdominal finding during the stage of shock, is tympanites, which is often marked and troublesome.

Delayed Signs. As is usual when a portion of a parenchymatous organ loses its blood supply and dies there is a febrile reaction. This fever is low, amounting to 1 or 2 degrees F. The temperature rises usually on the second day of the illness; it may rise earlier; it continues for a number of days and occasionally for as much as two or three weeks; there may be no fever. Associated with the death of the muscle and its disintegration there is usually a leucocytosis, also developing within a day or two, and continuing with the fever. The white blood-cells are from 12,000 to 15,000, exceptionally 20,000 to 25,000 per cubic millimetre.

The weakness of the ventricular wall, which is at its height during the second week after the accident, is responsible for the special accident of rupture of the wall, haemopericardium and rapid death. The accident is rare before the fifth day and after five weeks.

As has been stated, clot usually forms on the affected portions of endocardium, and this clot may become detached in small or large pieces and give embolism. The emboli may enter and plug any artery in the body, but are more common in the systemic than in the pulmonary circulation. Embolic accidents give rise to numerous complications, for example, hemiplegia, loss of circulation to a limb, splenic infarction and so forth; the presence of albumin or red blood-cells in the urine consequent upon small emboli is often valuable for diagnostic purposes.

When the pericardium is involved in the infarction and the area is on the front of the heart, friction sounds appear over the central and lower portions of the precordium. This pericarditis usually appears on the second or third day of illness and lasts a few days. Occurring in perhaps a quarter to one-third of the patients, it is a most important diagnostic sign and therefore should be sought for closely and daily where the diagnosis is in doubt.

The Electrocardiogram in Myocardial Infarction. In coronary thrombosis with myocardial infarction, a characteristic series of electrocardiographic changes appear; indeed, according to Pardee they are present in over 90 per cent of the cases. The first changes affect the R-T interval, which is elevated above the isoelectric line in either the first or third leads, so that the T wave takes origin from the descending limb of the R wave above the isoelectric line and there is an approach to the "plateau form." Whether the elevation of the R-T segment affects the first or third lead, the second lead may be similarly affected. Moreover, if the R-T segment is elevated in the first lead, it is depressed below the base line in the third lead, and vice versa. A characteristic displacement of the R-T segment from the base line has been observed as early as six and one-half hours after the initial pain. Subsequently the R-T segment returns towards the base line and the T wave changes dominate the picture. In the later stages the characteristic T wave (coronary T wave or cove-plane T wave) appears in the lead in which the elevation of the R-T segment occurred, the T wave generally becoming inverted. These changes may gradually disappear with a return close to the previous status or they may persist indefinitely. It should be mentioned that similar R-T and T wave changes occur in unusual instances of rheumatic fever and other varieties of myocardial damage, as well as under the influence of digitalis.

It has been confirmed experimentally by Barnes, Crawford and others, that the lead in which the R-T elevation occurs reveals the sight of the infarction. When the infarct is situated in the anterior and apical portion of the left ventricle, which is the result of thrombosis of the left coronary artery, the R-T interval is elevated above the base line in the first lead. On the other hand, when the elevation occurs in the third lead, it is the result of infarction of the posterior and basal portion of the left ventricle, which is due to occlusion of the right coronary artery.

Diagnosis

The picture in its typical form is too characteristic to be missed by those who know of it. The central feature is pain of anginal type that continues long beyond the expected time and fails to yield to nitrates. These cases used to be diagnosed "status anginosus." When the pain is over the lower sternum or in epigastrium, the trouble is apt to be mistaken for acute abdominal states, especially for perforated ulcer; tenderness and rigidity of the upper

abdomen and signs of collapse with vomiting occur in both. The age of the patient will often be helpful in differentiating, for ulcer commonly occurs in the young; a previous history recognisable as clearly anginal on the one hand or gastric on the other is often to be elicited. In thrombosis the patient will often speak of pain as present over the middle or upper sternum also. Abdominal cases though pale and haggard are not cyanosed as are those of thrombosis; neither do they present the evidences of oedema of lungs or early signs of congested veins, either of which may be of great value in differentiating. The severity of the pain may be responsible for a diagnosis of gastric crisis, but in this condition the pain is spasmodic and not continuous. The same is true of biliary colic.

When pain is less severe or mild, acute indigestion is apt to be diagnosed, and the true state may not become manifest until embolism or heart rupture occurs, or angina later develops.

Success in diagnosis will depend upon having the possibility of thrombosis in mind and in watching for the delayed signs of the disease, especially for the subdued fever, leucocytosis, red cells in the urine, and pericardial friction. The sudden onset of symptoms or signs of cardiac failure in a middle aged patient, unexposed to heavy work and afebrile at the time, should always arouse suspicion of coronary thrombosis. When the diagnosis is in doubt, electrocardiographic examination will often resolve the doubt; but patients should not be taken to the instrument. (Bed-side Electrocardiography).

Course and Prognosis

The course of coronary thrombosis is very variable. The mortality in the stage of the acute illness is generally estimated at about half the patients. In a number death occurs at the onset or abruptly after a day or two, and presumably from ventricular fibrillation; others succumb to rapidly deepening failure of the systemic circulation, or are suffocated by a rapidly developing oedema of the lungs; some are killed by rupture of the heart, others by rarer accidents such as the syncope of complete heart block, or gross embolism of brain or limb.

Those that recover may be severely crippled, in comparatively good health, or in any intermediate state; the ultimate condition depending largely on the condition of the remaining heart muscle and of the vessels supplying it. Originally regarded as a hopeless malady, further observation, especially more accurate diagnosis of the milder cases and the finding of scars of infarction in subjects unsuspected of the disease, has lightened the gloom of the previous outlook. Of those who convalesce well, some return to active lives for periods of five or more years and to live on in comparative activity for periods up to ten to twenty years.

Treatment

Immediate Measures. If the victim is in shock and the extremities are cold, he should be kept warm. Many of the patients breathe easily with one pillow, others require to be propped up; when there is syncope due to the cerebral ischemia of shock, this should be counteracted by keeping the head flat. Complete rest is essential and none but indispensable examinations should be carried out.

In the vast majority of cases, pain is the chief complaint. For this, one quarter grain of morphine sulphate should be administered subcutaneously. If the first injection does not relieve the pain, it should be repeated in twenty minutes. It may be necessary to give a full grain of morphine within a few hours. Some advocate initial one-half grain doses, but one quarter grain is usually sufficient. It should be remembered that excessive doses of morphine may depress respiration sufficiently to favour pulmonary atelectasis and secondary bronchopneumonia. Besides relieving the pain and securing sleep, it has been shown that under the influence of morphine a smaller cardiac output is required with resultant diminution in the work of the heart.

A measure that is of the utmost value in many cases is the administration of high concentrations of oxygen. It is indicated where there is pronounced cyanosis with or without dyspnea, and especially in the presence of well marked edema of the lungs. It is often life saving.

Intravenous injections of aminophyllin has been advocated for relief of the pain.

In the first days of the attack, the patient should be given only fluids by mouth, administered very slowly by the nurse. If orange juice or milk increase abdominal distention, they should be discontinued. In some cases vomiting due to the cardiac lesion or to morphine makes it difficult to give fluid by mouth. If the vomiting persists, physiological solution of sodium chloride may have to be given under the skin with as little disturbance to the patient as possible. Large intravenous infusions would seem to be contra-indicated because of the danger of pulmonary edema.

The morphine generally results in constipation. It is well that the patient should not be disturbed to move his bowels during the first two or three days, especially if distention does not develop; straining at stool is dangerous. After the third day a small enema may be given, but it should be carried out with the least possible disturbance to the patient. After the first few days, mild laxatives are usually advisable.

Distention is often a troublesome symptom; it may be partially due to morphine, but also occurs without the latter, perhaps as a result of a reflex from the heart. A rectal tube may afford some relief. If not, small enemas with turpentine may be attempted cautiously. Pituitrin has been used successfully for the tympanites of coronary thrombosis, but this would appear to be dangerous because of the pressor effect.

Emergencies. Certain emergencies may occur at any time from the very onset of the attack. Of these the most common is profound shock; the cyanosis becomes ashy, the pulse imperceptible, the systolic blood pressure falls below 80 mm., and death from peripheral circulatory failure is imminent. Vaso-constrictor drugs should be administered. Of these the most useful in critical situations is adrenalin, of which 0.5 or 0.75 mg. should be injected subcutaneously. In less critical situations, caffeine sodiobenzoate may be administered. Marvin and others have administered hypertonic glucose solution (50 to 100 cc. of a 50 per cent solution) with good results. It has been shown experimentally that intravenous injection of hypertonic glucose solution is followed by a marked and sustained augmentation of coronary blood flow. In cases of thrombosis with heart failure, this would not be indicated on account of the increase in circulating blood volume, and in the venous return to the heart which might well lead to pulmonary oedema. It is indicated in shock,

in which the circulating blood volume is low in comparison to the capacity of the vascular bed.

Another emergency that arises on rare occasions at the very onset is fulminant pulmonary oedema due to left ventricular failure. Venesection may prove life-saving.

Ventricular tachycardia occurs in rare cases of thrombosis and is very dangerous. There is sudden acceleration in the rate of the heart. According to Levine, ventricular tachycardia is characterized by a rate usually between 160 and 220 per minute, in which, while the rhythm is for the most part regular, there are occasional slight interruptions which are accompanied by variations in the intensity and quality of the first sound; the rate is uninfluenced by ocular or carotid sinus pressure. Levine has found that the administration of quinidine sulphate generally abolishes the ventricular tachycardia with restoration of regular rhythm; the doses he required varied between 0.3 and more than 1 gram, starting with the small dose and repeating with a larger one every four hours. Levine has recommended a routine administration in coronary thrombosis of 0.2 grams of quinidine sulphate three times daily for two weeks as a prophylactic of ventricular tachycardia and fibrillation and auricular fibrillation.

Auriculo-ventricular block with Stokes-Adams syndrone is a rare complication of thrombosis of the right coronary artery with infarction of the posterior portion of the septum. Since the syncopal attacks are dangerous the attempt should be made to accelerate the ventricular rate by the subcutaneous injection of 0.5 or 0.75 mg. of adrenalin. This may be repeated several times if the ventricular rate again falls. Auricular fibrillation or flutter may develop during the first days of coronary thrombosis, but are most often paroxysmal, for which reason quinidine and not digitalis is usually advisable.

Digitalis. The question of the use of digitalis in the first days of coronary thrombosis is a moot one. At present, most physicians do not use it. A well grounded indication for digitalis occurs only when coronary thrombosis results in a clinical picture dominated by heart failure with intense pulmonary engorgement, swelling of the liver and oedema. This is most often the case when the occlusion occurs in a heart that was previously functionally impaired. Digitalis is also indicated in the rare cases in which there is continuous auricular fibrillation with heart failure.

Insulin. A considerable proportion of cases of coronary thrombosis occurs in diabetics. One should be exceedingly circumspect with the administration of insulin in such patients. Insulin hypoglycemia increases the work of the heart, and the injection of insulin may be followed in individuals with coronary arteriosclerosis by anginal pain and perhaps thrombosis. Severe intensification of the symptoms may follow the injection of insulin; these may go on to a fatal outcome. Unless, therefore, progressive ketosis necessitates insulin, it should be omitted in individuals with coronary thrombosis. If insulin must be given, it should be covered with glucose by a very large margin, no matter how great the glycosuria, so that there is no possibility of hypoglycemia. In fact, Fishberg endeavours to maintain a hyperglycemia in the early phases of coronary thrombosis.

Later Management. Following the acute stage, the patient must be kept in bed for a protracted period; according to Lewis for at least eight weeks to ensure firm cicatrisation of the ventricular wall; during the whole of this

period the patient is to be guarded by day and night nursing, and helped in every way to avoid voluntary movement or effort. The patient is kept on a low calory diet with fluid and salt restrictions. If the patient is obese, advantage should be taken of the opportunity to obtain appropriate reduction in body weight. If symptoms of heart failure are present, the patient is to be treated according to general principles for the management of cardiac insufficiency.

It is to be stressed that a long rest is probably the more important the younger the individual, for we know that such individuals may have many years of happiness and economic usefulness after even severe myocardial infarction. The after-care is similar to that of cardiac failure or of angina with comparable symptoms.

Electrocardiographic records will now be demonstrated to indicate the importance of this procedure in cases of coronary thrombosis and coronary arteriosclerosis and in cases where the diagnosis is questionable after physical examination.

The Gerald Burns Memorial Fund

At a recent meeting of the Halifax Medical Society the opinion was expressed that we should do something for our medical colleagues overseas. A committee—which has since obtained the endorsation of the Medical Society of Nova Scotia—was appointed to deal with the matter. It is proposed:

1. That a Fund be raised to send certain gifts and comforts overseas.
2. That these be sent to the two units staffed by Nova Scotians—the 7th General Hospital and the 22nd Field Ambulance.
3. That the Fund be called the Gerald Burns Memorial Fund in memory of our late beloved colleague, who died on the eve of embarkation for overseas.
4. That the Fund be used to send each month such materials as cigarettes, chocolate, books, magazine subscriptions, Canadian newspapers, instruments if needed, and such other comforts and facilities as the need becomes apparent.
5. That the Fund be raised by asking members of the Society to each contribute any sum from $5.00 to $50.00.

Most of our colleagues overseas have gone there at great personal and financial sacrifice. If these gifts do nothing else, they will show the recipients that we appreciate what they are doing for us.

Let's show the men who are fighting our battles that we haven't forgotten them!

Address all contributions to:

Dr. H. G. Grant
Treasurer Gerald Burns Memorial Fund
Dalhousie Public Health Clinic
Halifax

Correspondence

184 College Street
Toronto 2, October 24th
1941

Dear Doctor:

We are sure that every member of the medical profession in Canada will be glad of an opportunity to do something personal to aid the British in their magnificent fight for freedom. Through the Red Cross, there has come to the Canadian Medical Association an appeal for used surgical and medical equipment to be sent across the water as soon as possible. You are doubtless aware that many large hospitals as well as many individual medical practitioners' offices throughout the British Isles have been bombed and destroyed. Hospitals seem to be a favourite target for the Nazi bombers. To adequately care for the sick and wounded, great numbers of small hospitals, civilian and military, have established throughout the British Isles. More may be required. Equipment for these hospitals is sorely needed. Thus, this appeal to Canada.

We are of the opinion that every Doctor has some piece of equipment which he or she could spare to help our brethern on the front line. If this equipment, either surgical or medical, is not in perfect condition but is not too far gone to be repaired and refinished, we can use it. The Canadian Red Cross has undertaken to act as the receiving depot for all material, and they have further guaranteed that all equipment received will be put in perfect condition before it is shipped.

Under the Chairmanship of Dr. E. A. McCulloch of Toronto, a medical committee has been set up which will examine every piece of equipment, classify it and recommend the necessary repairs. Will you please look over your stock of instruments and medical appliances now and see what you would like to send. Everything from artery forceps to therapeutic lamps is required. Nothing is too small or too large.

All parcels should be addressed to the Canadian Red Cross Society, 95 Wellesley Street, Toronto, Ontario, and labelled, "Medical Equipment for Britain".

We are confident that this appeal will have a magnificent response. Medical Societies, groups of Doctors centered about hospitals and other groups will unquestionably be getting together to make this campaign highly successful in all sections of the country.

And by the way, if you know of a Doctor's estate or deceased colleagues' equipment which is just lying dormant, look the situation over. It may be that the next of kin would feel very happy in having this equipment used for purposes that this appeal is intended to fill. Will you please act now.

Yours sincerely

T. C. Routley
General Secretary

184 College Street
Toronto 2, Nov. 3rd
1941

TO THE SECRETARIES OF DIVISIONS

Dr. H. G. Grant
Sec'y Nova Scotia Division
Canadian Medical Association
Dalhousie Public Health Clinic
Halifax, N. S.

Dear Doctor Grant:

Re Used Surgical Instruments for Britain

It is already evident that, in response to our letter of October 24th on the above noted subject, many Doctors desire to cooperate.

In order to facilitate shipments, the Red Cross is advising its Divisions and Branches that they may receive parcels locally from the medical profession, to be trans-shipped later to Toronto. Perhaps you would like to pass this information along to the members of your Division.

Yours sincerely

T. C. ROUTLEY
General Secretary

Halifax, N. S., October 27, 1941

To the Members of the N. S. Division
Canadian Medical Association:

As your representative on the Executive of the Canadian Medical Association, I attended the October meeting held at the Chateau Laurier, Ottawa on October 22nd, 23rd and 24th.

The meeting was called to order at 9.30 in the morning of the 22nd and, after the roll call and reading of the minutes of the previous meeting, the Committee adjourned to the library of the Department of Pensions and National Health, where we met the Minister, the Hon. Ian MacKenzie, his deputy, Dr. Wodehouse, and Dr. Heagerty.

We remained in conference during the whole of the day, adjourning only for lunch. The meeting lasted from 9.30 a.m. until 5 pm. The Hon. Mr. MacKenzie requested that the matter under discussion be kept strictly confidential at present, but I might add it was a most satisfactory and important conference, and that every consideration was given to the suggestions and opinions of the Executive Committee.

All the members of the Executive were given an opportunity to ask any questions they desired and the meeting developed into a general round table talk. Every member left the Conference that afternoon feeling that the Department of Pensions and National Health had the interests of the profession of Canada at heart and, at the request of the Minister, a committee of seven members was appointed, which will be at the call of the Department for further

conferences at any time that they may desire it. Further, the committee, which will be known as the "Committee of Seven", can, at their discretion, consult the Department at any time in the interests of the proposed legislation.

The same evening, the Executive, reconvened again in the library of the Department and discussed the proceedings that occured during our conference with members of the Department. Neither the Minister, nor his deputys was present at the evening session, but the "Committee of Seven" decided to again meet the Minister the following morning and present our views. This was done, the "Committee of Seven" meeting the Minister and the members of his Department the following morning. The discussion on Wednesday night lasted until 11 p.m.

On Thursday, the Executive met again at 9.30. The first matter under discussion was the report of the sub-committee on epidemics. The first business discussed was the report and it was decided that the Secretary should write each Division and ask each Division to set up its own chairman. Following this, the request of a number of members interested in the subject of gastro-enterology proposed that a section of gastro-enterology be formed in the Association was discussed freely and it was decided to refer the matter to the various divisions for their opinion.

The next matter under discussion was the War Benevolent Fund. As you know, registration under the War Charities Act has been granted. Publicity has been arranged in the Journal. Funds to the extent of $1,555.00 have been collected in British Columbia and forwarded to England. So far as Nova Scotia is concerned, nothing has been done, but the chairman reported that a cheque for $100.00 had been received from a doctor in Halifax.

the next matter under discussion was the Winnipeg meeting of 1941, followed by the Financial Statement, Analysis of Registration and Comments by the President.

The next meeting for 1942, which is to be held at Jasper Park was then discussed. The Executive meets on the 12th and 13th of June and the Association meets on the 15th and 16th. The General Secretary, the President and the President Elect recently visited Jasper Park and satisfactory arrangements have been made for the meeting.

Dr. Fahrni, the President, then gave his report of his official visit to the Divisions and we, who were present at the meeting at Kentville, remember Dr Fahrni well and favorably.

Following this, matters relating to the war were under discussion: The report from the Services re medical enlistments—this discussion was entered into very freely. The question of interns and the enlistment of recent graduates was discussed. The fact that so many of our men on graduation are not in good financial circumstances prompts the new graduate to seek general practice in order to pay his debts, rather than enlist and, particularly, in view of the fact that the new graduate has to spend from 9 to 12 months as a Lieutenant before he becomes promoted to Captain.

Colonel Graham was present at this discussion and it is to be hoped that something will be done, which will tend to make the new graduate offer his services.

It was brought out that so far as routine drill is concerned in the clinical years that this has been abolished and in its place a course in military medicine

will be given, in addition to the ordinary clinical subjects. A syllabus having a direct bearing on this type of teaching is being prepared and will be sent to the various medical schools.

A report re medical boards nominated by the Divisions at the request of the Department of National War Services was reported on, also reports from the various Divisional Advisory Committees. As a result of the discussions which followed on this report, it was brought out that there has not been the co-operation that is expected from all of the Divisional Advisory Committees with the military authorities. In the absence of a report from Dr. Corston, Chairman of the Advisory Committee for N. S. Division, I reported verbally and was able to do this as a result of a conversation, which I had with Dr. Corston just previous to my leaving for the meeting.

Dr. McPhedran of Toronto suggested a badge or a button for internes to to be worn, who have signified their intention of joining up. It was agreed and concurred in by all that every effort at all times should be made at our medical meetings to encourage enlistment in the various forces.

The report from the committee re Orthopaedic Unit for Scotland was presented. Dr. D. G. Robertson, who is the Chairman, was present and discussed the matter fully. It was the decision of the committee that full authority be given to Dr. Robertson and his committee to act. Dr. Robertson felt that he would be successful in being able to establish such a Unit.

Various reports were then presented by the Honorary Treasurer, the Managing Editor, the Editor and various reports from other Committees, including a report of the Department of Hospital Service.

Dr. Harvey Agnew, the Associate Secretary, was present and presented his report regarding the Department of Hospital Service. The report of the Special Committee re Collection of Used Surgical Instruments for England was then taken up and discussed very fully.

An appeal which has been made through the Canadian Red Cross and to the members of the profession in Canada to do something to help was brought out. It was suggested that the various hospitals throughout Canada should take an active part. In some hospitals, baskets with a placard are placed in some conspicuous part of the hospital and the members of the staff of the hospital are requested to put any old or used instruments that they might have in the basket. They are sent to the Canadian Red Cross in Toronto, where they are inspected and, wherever possible, put in shape before being shipped to England.

The question of the formation of a Division of the C. M. A. overseas was discussed. Col. E. A. McCusker advises against the formation of such a division and recommends recognition of Canadian Division Medical Societies. The executive felt very strong in this matter and were highly pleased at the recommendation.

Applications for affiliation of the Second Canadian Division Medical Society was granted.

Following this, a very instructive discussion took place regarding rehabilitation of youths found to be below Category A. Major General LeFleche was present with his mdeical advisor, Dr. Christie. This discussion lasted for an hour and a half and was most instructive. The basis of this discussion was on an analysis of 50,000 medical examinations, in which only 61.69% of the youth of our country were in medical Category A. The average age of the 50,000 examined was 22.5. The average height 5 ft. 6 3/5 in. Average weight, 144 6/10 lbs.

Conditions such as defective eye sight, foot trouble, certain gastric stomach conditions, bronchitis, rheumatism, eye and ear trouble, rupture, hernia, mental condition and veneral conditions. Various others are among the causes listed and it is felt that a great number of these men can be rehabilitated and can be placed in Category A by means of certain operative procedures. A committee of 6 medical men from various sections throughout Canada had been appointed by branches of the various Divisions and it is hoped that a large number will be rehabilitated as a result of this procedure.

Dr. Routley, the General Secretary, then asked the members of the Executive representing the various Divisions that they remember and suggest to the various divisions those who will be eligible for Honorary Membership.

The Health League of Canada sent a communication wishing the C. M. A. to memorialize the Dominion Government to take steps to cut down the volume of unnecessary illness in Canada. Someone asked "Who is the Health League of Canada?" The General Secretary said that it was originally known as the Society for the Prevention of veneral diseases. Following the formation of this Society, it became known as the Social Service League and following this, it is now known as the Health League of Canada.

A letter from Mr. A. B. Wood of the Sun Life of Canada re medical research in the cancer field was read. The gist of this letter was that Mr. Wood criticized the King George Cancer Fund for not using the funds for research, rather than using it as it is now, for educational purposes.

Following this, a communication was read from the Chairman of the Medical Societies Province of Quebec as to how they may become more closely related to the C. M. A. This was referred back to the Quebec Medical Association and to their various Divisions.

The next important question discussed was the restriction of the sale of gasoline. The General Secretary's attention was drawn to the matter and it was left to him to take it up with the Oil Comptroller or his representatives.

A discussion then took place re proposal for Banting Memorial. Various opinions were expressed. As Toronto University was the body particularly interested although it was pointed out that every individual the world over should be interested, a committee with Dr. McPhedran as its chairman was left to report.

This ended the general business and the Executive adjourned after three days of strenuous work.

H. K. MacDonald, M. D.

Halifax, N. S.
November 15, 1941

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

Cases have recently come to light where physicians employed periodically to examine recruits have been paid for such examinations by the Army although the physicians have been in receipt of one day's pay from another branch of the Service for days on which they also claimed for examination of recruits.

Existing regulations are interpreted to mean that a physician may receive only one day's pay irrespective of whether recruits are examined for either Navy, Army or Air Force.

In an effort to correct this duplication of payment, and to clarify the situation, we are submitting the attached memorandum with a request that it be prominently displayed in a subsequent issue of the BULLETIN.

(C. E. A. DEWITT) Lt. Colonel, R.C.A.M.C.
for D.M.O., M.D. No. 6

In connection with the submission of accounts for Medical examinations of recruits for the Canadian Armed Services by civilian physicians advice has been received that the following regulation is now in effect and must be adhered to in order to have accounts passed for payment:—

> "Before District Medical Officers certify accounts for medical examinations of recruits, the civilian physician concerned should certify that he has made no claim on another branch of the Service for remuneration for services performed on that particular day."

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184 College Street
Toronto 2, Nov. 13,
1941

TO SECRETARIES OF DIVISIONS

Dear Doctor:

Re Membership

Herewith enclosed you will please find a membership chart covering the years 1940 and 1941.

All Divisions are requested to study this information carefully.

A few observations would appear to be in order:

—Three Divisions have shown a gain.

—Five Divisions have shown a loss.

—We are carrying 433 members in military service without fee—an increase of 246 over the previous year—and this figure will undoubtedly increase while the war continues.

There are 5000 Doctors in Canada who do not belong to the Canadian Medical Association, every one of whom should be urged to join NOW.

Governments, national and provincial, are engaged in careful study of Canada's health needs as they see them. We may expect far-reaching legislation in the not distant future. The Canadian Medical Association is endeavouring, to the best of its ability, to interpret to those in authority what the medical profession believes to be sound procedures; but we must be able to speak for all of the medical profession if we hope to accomplish what every Doctor in Canada would wish us to do.

Right now is the time for every Division to seek 100% membership in the provincial and national Associations. And, remember, if we are a divided profession, half organized and half outside, we cannot expect our voice to be heeded with any greater degree of influence than our stature among our own people would appear to justify.

The present situation demands serious thought and action—and that's the plain truth.

Please do your part in the interests of those who are in practice as well as in the interests of those who will come after us.

If we can speak with authority for 9,000 to 10,000 Doctors, we can hope to direct our professional destiny. This is an urgent appeal based upon an urgent need.

Yours sincerely

T. C. ROUTLEY
General Secretary

CANADIAN MEDICAL ASSOCIATION

Membership Statement Nov. 13, 1941

Province	Members		Gain or Loss	Subscribers		Gain or Loss
	1940	1941		1940	1941	
British Columbia	444	416	— 28	16	19	+ 3
Alberta	567	567	— 0+0	31	29	— 2
Saskatchewan	311	290	— 21	5	10	+ 5
Manitoba	197	333	+136	20	26	+ 6
Ontario	1,805	1,520	—285	215	233	+18
Quebec	635	652	+ 17	66	98	+32
Nova Scotia	288	255	— 33	7	13	+ 6
New Brunswick	145	163	+ 18	3	4	+ 1
Prince Edward Island	39	33	— 6	0	0	..
United States	19	21	+ 2	284	281	— 3
Miscellaneous	13	12	— 1	81	66	—15
Military Service	187	433	+246	...	...	..
Totals	4,650	4,695	+ 45	728	779	+51

184 College Street
Toronto 2, Nov. 10, 1941

TO THE SECRETARIES OF DIVISIONS

Dear Doctor:

Re Section of Gastro-Enterology

At the last meeting of the Executive Committee of the C.M.A. a recommendation was received from eighteen members interested in the subject of gastro-enterology, that a Section of gastro-enterology be formed in the Association.

Before reaching a decision in the matter, the Executive Committee would like to know how many members would be interested in the establishment of such a section; and it was duly moved, seconded and agreed that the General Secretary be instructed to consult the Divisions as to the extent of the interest in the establishment of a Section of Gastro-Enterology; and also that the matter be given some publicity in the Journal.

It would be appreciated if you would let me have such information as

you may be able to obtain from your Division with reference to this matter.

Thanking you, I am

Yours sincerely
(Sgd.) T. C. ROUTLEY
General Secretary

NOTE: If any of the members are interested in the establishment of a Section of Gastro Enterology will they kindly notify the Secretary.

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184 College Street
Toronto 2, Nov. 8, 1941

TO THE SECRETARIES OF DIVISIONS

Dear Doctor:

Re Committee on Public Relations

Herewith enclosed you will please find a copy of a letter from the British Columbia Division, which was considered by the Executive Committee at its last meeting.

I am also enclosing a copy of the Minute on the subject, as found in the proceedings of the Executive Committee.

It will be appreciated if your Division will give this matter the consideration which it merits, and let me have a reply at your convenience in order that, when next the Executive Committee meets, it may have the benefit of the views of the nine Divisions on the subject.

Yours sincerely
(Sgd.) T. C. ROUTLEY
General Secretary

THE BRITISH COLUMBIA MEDICAL ASSOCIATION

203 Medical-Dental Bldg.
Vancouver, B C.
Oct. 6, 1941

Dr. T. C. Routley
General Secretary
Canadian Medical Association
184 College Street
Toronto, Ont.

Dear Doctor Routley:

Arising out of a discussion which took place between the Health Insurance Committee and the Committee on Economics in this province, a recommendation was passed to the Board of Directors of the British Columbia Division that a Special Committee should be set up, whose duty it would be to formulate a definite programme on Public Relations, having in mind the necessity of informing the people on all questions dealing with medical care, so that they may have a better understanding of the viewpoint of the profession when we attempt to interpret their needs.

The value of such an effort by the profession was very much impressed upon us in British Columbia in 1937, and since, by certain misunderstandings of our viewpoints, and interpretations placed upon our actions. While we

realize that it is impossible to convince certain groups of our sincere approach to problems affecting the public weal, yet it is quite possible that a large section of the more intelligent members of any community might grasp our meaning when we define the standards which we attempt to protect. There will always be a certain group who will impute ulterior motive but, thank goodness, that with proper understanding this might constitute a minority.

Our Board of Directors felt that any programme along this line which would be attempted, might better be handled nationally and, therefore, I was instructed to forward a recommendation to the Canadian Medical Association that the establishment of a Central Committee on Public Relations be considered by the Executive, and with a suggestion that branches of such a Committee might be formed in each Province.

I hope that I have not been too discursive and that my excursions into the possibilities of such a programme have not masked my meaning.

Kindest personal regards

Sincerely

(Sgd.) M. W. THOMAS
Executive Secretary

San Francisco,
October Thirtieth
1941

Hugh W. Schwartz, M.D.
THE NOVA SCOTIA MEDICAL BULLETIN
The Dalhousie Public Health Clinic
Halifax, Nova Scotia

Dear Doctor:

The principal object of the American Urological Association is "to encourage the study, improve the practice, elevate the standards and advance the cause of Urology." The simplest way to impress upon neophytes the value of true scientific work is by means of a material award. Hence, we would like to have each year an outstanding medical paper that would warrant a $500.00 check, but if such is not forthcoming we can make several smaller prizes. We are not interested in stereotype theses for an advanced degree without they represent original work of potential value. The competition is open to all properly trained young urologists, and for that reason we would like to have this chance of a young man obtaining some money at a period when it is badly needed, widely publicized, so that all may have an equal opportunity,

Please publish in your magazine the following notice:

Urology Award: The American Urological Association offers an annual award "not to exceed $500.00" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

Essays shall be in the hands of the Secretary, Dr. Clyde L. Deming, 789 Howard Avenue, New Haven, Conn., on or before April 1, 1942.

Yours very truly

MILEY B. WESSON
Chairman, Committee on Scientific Research

Personal Interest Notes

DR. H. K. MacDONALD of Halifax, attended the sessions of the Canadian Medical Association Executive in Ottawa during October, the chief feature of the sessions being the discussion of the proposed federal legislation associated with "Health Insurance."

Five persons escaped with minor injuries when a passenger automobile and an army truck crashed head-on on the Point Edward road several miles from North Sydney on October 24th. The most seriously hurt were Dr. and Mrs. J. S. Munro of North Sydney. The former was knocked unconscious and suffered chest injuries, while Mrs. Munro was thrown through the windshield of their car.

Dr. and Mrs. Dixon Dobson of Yarmouth, enjoyed a ten day motor trip to Montreal during October.

Sponsored by the Department of Health, Halifax, Tuberculosis clinics were held in Kings County the end of October. Canning was the central point, twenty-five children received medical examination, X-ray and fluoroscope examinations. The clinic was held at Dr. H. A. Foley's office, the attending physician being Dr. E. L. Eagles, Divisional Medical Health Officer, Windsor, assisted by the County Health Nurse, Miss Cox, Kentville.

Dr. O. R. Stone of Bridgetown, arrived home in October after an extensive trip on which he went as far west as Calgary and the Rockies. While away he visited hospitals in Montreal, Toronto, and other large cities en route.

About two hundred children of the Central and Stella Maris schools in Pictou were given the first treatment for immunization against scarlet fever on October 14th. The clinic was held at the Central school with Miss Hardy, V.O. Nurse assisting, with Dr. M. R. Young, town health officer, Dr. G. G. Simms, divisional health officer, Dr. G. A. Dunn and Dr. G. B. Howell in attendance.

Dr. A. E. Blackett of New Glasgow, attended the annual meeting of the Royal College of Physicians and Surgeons in Ottawa in October.

Dr. J. G. MacDougall of Halifax, has been elected to the Board of Directors of the Bank of Nova Scotia, filling the vacancy created by the resignation of Hon. James C. Tory, former Lieutenant-Governor of Nova Scotia, who had served on the board since 1927 and resigned because of failing health.

Twenty-one Nova Scotia hospitals appear on this year's list of approved hospitals and cancer clinics in the United States and Canada. The list, issued

by the American College of Surgeons, includes Camp Hill Hospital, Children's Hospital, Grace Maternity Hospital, Halifax Infirmary, Victoria General Hospital, Halifax Tuberculosis Hospital, Halifax; Nova Scotia Sanatorium, Kentville; St. Martha's Hospital, Antigonish; Nova Scotia Hospital, Dartmouth; Glace Bay General Hospital, St. Joseph's Hospital, Glace Bay; Aberdeen Hospital, New Glasgow; New Waterford General Hospital, New Waterford; Hamilton Memorial Hospital, North Sydney; City of Sydney Hospital, St. Rita's Hospital, Sydney; Colchester County Hospital, Truro; Yarmouth Hospital, Yarmouth; Highland View Hospital, Amherst; Harbour View Hospital, Sydney Mines and Eastern Kings Memorial Hospital, Wolfville.

The New Zealand government and the New Zealand medical profession have reached a compromise solution in their long-drawn out dispute over medical fees. The state will refund to patients seven shillings and sixpence (about $1.35) by day and twelve shillings and sixpence by night for each consultation given by doctors. Doctors, in turn, while permitted to charge what they wish, may not sue in courts for more than basic fees. The compromise, while still leaving the medical profession dissatisfied was said by the doctors to remove what they consider to be the most "objectionable" features of previous schemes proposed by the government to regulate medicine. —*Truro News*, October 6th.

Town Council Talks Chlorination

Robert VanBurek, representing a Toronto firm, was in Antigonish on Monday, November 3rd, making a personal survey of the local water system. In the evening he attended the regular meeting of the town council and discussed the cost of installing either of two types of chlorination plant, to ensure the safety of the local water supply at all times. Both systems are fully automatic, and while one, the gas chlorination method, costs more to instal, its upkeep is considerably less. This method met with the council's approval, and the clerk was instructed to get in touch with the department of municipal affairs for authority to borrow up to $4,000 to make the installation recommended strongly by the department of public health. The main chlorination plant will be at Clydesdale, with an auxiliary at the emergency pumping station on Victoria Street.

Dr. W. F. MacKinnon, public health officer for the town, was present at the meeting. He stated that the local water supply was now all right.—*Antigonish Casket*, November 6th.

Congratulations to Dr. and Mrs. G. J. LeBrun of Bedford, on the birth of a son, Gerald Paul, on November 10th, and to Dr. and Mrs. T. B. Acker of Halifax, also on the birth of a son on the same date.

Dr. H. A. Creighton of Lunenburg, has been honoured by His Majesty, the King, with admission to the grade of officer in the order of the Hospital of St. John of Jerusalem. Dr. Creighton has been interested in the St. John Ambulance movement for many years and is at present surgeon of the Ladies' Division.

Dr. H. W. Schwartz of Halifax, attended the meeting of the American Academy of Ophthamology and Oto-laryngology in Chicago in October.

Dr. L. M. Morton of Yarmouth, Dr. J. E. LeBlanc of West Pubnico, Dr. M. G. Tompkins of Dominion, Dr. W. A. Curry, Dr. N. H. Gosse, Dr. J. V. Graham and Dr. R. H. Stoddard of Halifax, attended the annual Congress of the American College of Surgeons in Boston which was held the first week of November.

Dr. and Mrs. F. E. Rice of Sandy Cove, recently returned from a month's vacation trip through New England.

The marriage was solemnized on October 4th at Kentville of Nora, youngest daughter of Mr. Samuel English McManus of Lismore, Pictou County, and Dr. George Graham Simms of Pictou, only son of Mrs. George Simms, Halifax, and the late Lieutenant-Colonel G. Simms, well known military officer, who was stationed in Halifax with the Canadian Army Service Corps for many years. Dr. Wilfred Dyer of Halifax was best man, Miss Sarah Geraldine Simms the bridesmaid, and Dr. E. L. Eagles of Windsor and Dr. E. M. Found of the staff of the Nova Scotia Sanatorium were ushers. Dr. Simms graduated from Dalhousie Medical School in 1938.

Dr. M. E. McGarry of Margaree Forks received cuts about the head and body bruises when his automobile plunged over a steep embankment on the Pleasant Bay highway the latter part of September. Dr. McGarry and three companions were en route to a meeting in Pleasant Bay.

Dr. and Mrs. M. G. Tompkins of Dominion were pleasantly surprised on September 29th on the occasion of the twenty-fifth anniversary of their marriage, when a coach drove up, with a coachman and footman in correct costume on the box. Seated within the coach were the best man and bridesmaid at the Tompkins marriage twenty-five years ago. Dr. and Mrs. Tompkins were driven to St. Charles Convent where a pleasant evening was spent and where they received gifts of silver.

Dr. and Mrs. J. R. McCleave of Digby were on a motor trip around the Cabot Trail the latter part of September.

Dr. E. D. Dickie of Digby recently relieved the doctor on Grand Manan Island for a few weeks.

Dr. George Archibald, Dal. '98, of Kamloops, B.C., visited his brother J. B. Archibald and Mrs. Archibald of Middle Musquodoboit during September.

Eleven graduate nurses of Yarmouth Hospital received their diplomas at colourful graduation exercises staged in Zion Baptist Church on October 3rd. During the exercises Dr. L. M. Morton sang two songs and Dr. C. K. Fuller appeared as acting mayor. Dr. G. V. Burton gave the doctor's address. Following the graduation exercises the new graduates were entertained at a dance given in their honour at Milo Aquatic club house.

Nine graduate nurses of the Grace Maternity Hospital received their diplomas at the exercises held September 29th in St. Andrew's Church Hall, Halifax. The medical superintendent of the hospital, Dr. P. A. Macdonald, led the graduates in the taking of the Florence Nightingale Pledge. The graduation address was delivered by Dr. H. B. Atlee.

Dr. Thomas A. Lebbetter of Yarmouth spent the most of the month of October in the United States attending the Post-Graduate Session of the New York Academy of Medicine on Cardio-vascular Diseases.

Obituary

LIEUTENANT-COLONEL GERALD ROSS BURNS, M.D., officer in charge of medicine, No. 7 Canadian General Hospital, A. F., died in the early morning of November 16, 1941. Death followed the perforation of a duodenal ulcer eight days before, and broncho pneumonia. November 19 would have been his fortieth birthday.

Lieutenant-Colonel Burns was the son of Mrs. Burns and the late John D. Burns of Halifax. He attended St. Mary's College where he received his degree in Arts. In 1925 he graduated in medicine from Dalhousie. For a time after graduation he served as assistant superintendent of the Nova Scotia Sanatorium and later carried out postgraduate studies in internal medicine at the University of Pennsylvania.

In 1929 Dr. Burns returned to Halifax where he opened an office. His appointment as assistant attending physician at the Victoria General Hospital followed. For a term he acted as chairman of the medical staff there. He was a president of the Halifax Infirmary Medical Staff and assistant professor of Medicine at Dalhousie. He was a fellow of the American College of Physicians.

At the outbreak of war Lieutenant-Colonel Burns went on active service with his unit, the 22nd. Field Ambulance. For a time he was Acting Officer Commanding at Cogswell Street Military Hospital, in Halifax, where, through his efforts the Burns Annex was built and named in his honour. From there he transferred to No. 7 General Hospital, on its formation, as officer in charge of medicine.

Surviving are his wife, his son, Gerald Ross, jr., aged three, his two year old daughter, Mary Judith, his mother, two brothers, Rev. Dr. John E. Burns, pastor of St. Peter's Church, Dartmouth, and Right Rev. W. J. Burns, V.G., rector of St. Mary's Cathedral, and two sisters, Miss Eileen and Miss Eveleen.

Gerald Burns was a good physician and a good Christian. His long, loping strides and his ranging mind bore him over varied fields in the four decades that were given him. Four decades are few, as we measure lifetimes. Many of us would find in them scant opportunity to prepare worthily our mortal cycle. To Gerald Burns they have been enough.

Medicine he loved with all the fullness of a great heart and it made a place for him. This place was unique, acknowledged by the hoary headed of his confreres, as by his contemporaries. His stethescope, with the big diaphragm which he liked because it told him so much, brought truth to his ears, and only truth, unburdened with imaginative whisperings. His clinical opinions, nurtured in observation and thought, were plain, deliberate, unfaltering. His therapy was simple. A new drug he was happy with, as in earlier years a new toy. But in the struggle against mortal disease he moved steadily on the fundamentals of proven medicine.

No little part of his clinical understanding grew from his love of mankind. His patients gave him their confidences and their trust becuse thay saw understanding and tolerance in his brown eyes; because they were put at ease by his booming, hearty laughter. With all his confreres he moved as a dependable

friend. The faith they placed in him was in return for his belief in them. To very few men are given the wholesome love of their fellows possessed by Gerald Burns. Perhaps the most unkind remark he ever made of another was that he knew no better. He was able to see the virtues of those about him, and they outweighed always the faults.

To appraise a man's faith is a poor task for mortals. Through all the fields he passed, green, barren, rocky, Gerald Burns saw clearly a way of life. He could discuss his faith with logic and clear fact; for himself he left it unreasoned, because it had no need of reason. It was in itself complete, the means, and the end. As he lived, so he died, bravely, peacefully, in perfect faith, and with a calm hope.