Problems of Rural Health Organization

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IT was about 25 years ago that I made my first contact with public health problems in the rural sections of our country. At that time our annual meetings of the State Health Officers with the Public Health Service were devoted to a considerable extent to discussions of the excessively high incidence of typhoid fever, dysentery, malaria, hookworm infection, and other preventable diseases in our rural areas and to ways and means of combatting them. For the most part it was the general opinion among the more experienced health officials that while there was critical need for sanitary measures, no practicable plans for their introduction and operation had been devised. Certain of the younger men, however, were optimistic in their belief that if improved methods were accepted by our rural people in agriculture, stock raising and other pursuits, they would also be amenable to common sense measures for the protection of human health. And so it is that step by step, through educational campaigns, and surveys and demonstrations, a definite program of organized local health work has been developed through the intervening years.

From the scientific point of view we have made great strides in medicine and in public health. We have reduced the general mortality. We have cut the tuberculosis rate to one-half that of fifteen years ago. We have reduced the pneumonia rate and have the facilities to reduce it further. With this lengthening of the life span there has been no general increase in the degenerative diseases of late life. The mortality of women and children has been reduced. We have begun to discuss frankly and to face squarely the threat presented by our two more prevalent serious diseases—syphilis and gonorrhea. Consider for a moment some of the very forward steps which have been taken during that brief period of years since the World War.

Diphtheria immunization has been developed first by toxin-antitoxin and more recently by the simpler toxoid method. Diphtheria can be eliminated.

We have made great advances in our knowledge of nutrition. As Surgeon General Parran recently remarked: "Fifteen years ago the word vitamin was known only in the scientific laboratory and medical circles. Today it is a household word."

For tuberculosis we have developed collapse therapy, and chest surgery. We have perfected skin tests to discover the presence of tubercular infection. We have developed the X-ray to diagnose active forms of that disease.

We have learned to differentiate the various types of pneumonia and for some of these types we have developed serums of great curative value.

During the past ten years studies sponsored by the U. S. Public Health Service have so perfected the diagnosis and treatment of syphilis that medicine can deal with it more effectively today than it can deal with any other similarly serious disease.

Radiation with X-ray and radium have brought even to cancer a prospect of cure in an outlook which once was hopeless.

If clinical practice bears out early promises, sulphanilamide and its related compounds will give medicine effective weapons against gonorrhea and streptococcus infections which in the past for sometime have been hopeless. This advance in chemotherapy may prove to be the most significant discovery for our generation.

So we have made progress against some of the more epidemic diseases. We have not made similar progress against others. In some fields, such as mental hygiene, our answers are still uncertain. The incidence of mental disorder and crime suggest the challenge that better mental health presents to the community. In some other fields, such as syphilis, we have the medical means at hand to stamp out disease, but have made little progress as yet toward public health control. I have, however, every confidence that where medicine has created the means to defeat a disease that we will undertake to defeat it. Science cannot announce the availability of such facilities without creating a public demand that they be used.

People believe and believe quite properly, I think, that they have a right to health. The right of a woman to her own life at childbirth, her right to a live and healthy infant cannot be considered conditional upon the income of her husband. The men and women concerned, aren't going to think so either. The American Institute of Public Opinion during the last year has shown that 81 per cent of the voters say "Yes" to the question: "Do you favor Federal aid to provide better care for mothers in childbirth?" Even a higher per cent said "Yes" to the question: "Will you take a free, confidential blood test for syphilis by your family physician?" A similarly overwhelming sentiment was found to a proposal for a Federal appropriation of $25,000,000 a year to control syphilis. Twenty years ago Sir William Osler commented with rare insight: "In the matter of health we can trust the people. Once get a democracy to realize that it is diseased and it shows a Job-like regard for its skin."

Americans particularly are going to face this challenge. If there is one thing that distinguishes Americans from other races it is their inability to be satisfied with something which is merely "pretty good". The automobile of 1915 would run. The automobile of 1925 would run still better. But whenever engineers could devise ways to making automobiles better, or simpler, or more available, Americans could be found who undertook to do it.

Lord Macaulay could say with smug satisfaction: "No man who is correctly informed as to the past, will be disposed to take a morose or desponding view of the present." We, on the other hand, may do somewhat better than we did in the past, but we make no claim to self-satisfaction. Our success must be measured in our ability to do better next year and the year after.

Now just what are we faced with in that next year and year after? Our progress has been great but it has not been well distributed; for example, I have said that we have brought the infant mortality rate down. One of my colleagues lives in an area of the city where the infant mortality rate reported last year was ten per thousand, yet in a three mile trip as he comes to his office in the Public Health Service each morning he passes through another district of the city where the infant mortality was 159 per thousand. These differences in the infant mortality rate are closely related to income.

In the United States Public Health Service we have conducted recently a nation wide survey intended to get facts about disease which have not hitherto been available. How does health relate to income, to employment status, to occupation, to age and sex and color? How is preventable illness related to these economic factors? Now there are ten diseases which are highest in the number of deaths they are responsible for: Heart disease, cancer, pneumonia and influenza, cerebral hemorrhage, nephritis, tuberculosis, diabetes, diarrhoea and enteritis, appendicitis and syphilis. The study noted that in the case of seven of these ten diseases, all but cerebral hemorrhage, diabetes, and appendicitis, death rates steadily rise as income goes down. Take for instance respiratory tuberculosis. There are three times as many deaths from respiratory tuberculosis among skilled workers as among professional workers. There are seven times as many deaths among unskilled workers as among professional workers. Or take pneumonia as another example. Pneumonia kills three and one-half times more unskilled workers than it does professional workers. Deaths from diarrhoea and from syphilis are twice as high for the unskilled as for the professional group. Cancer kills fifty per cent more unskilled workers than professionals. For all these causes combined the death rate is twice as high for the unskilled worker as for the professional.

It is one thing perhaps to point out that there is a great unoccupied field in which men and women—our basic national resource—are being ill cared for or not cared for at all in sickness and death. But what are we going to do about it? One may grant that it would be humanitarian to care for these underprivileged. The other question which will be asked is: "Can we afford to care for them?"

The Surgeon General answered that very clearly in a recent address before the Association of Life Insurance Presidents. He said: "We cannot afford to carry the unnecessary load of preventable sickness and death. Ill health is bad business. With the passage of the Social Security Act the nation has assumed a financial stake in good health. Illness and death cost taxpayers money. Social Security laws provide pensions for fatherless children made dependent by the death of a bread winner from tuberculosis, or made motherless by death in childbirth. Pensions are paid for the blind. A recent study shows that the total cost of maintaining persons blind on account of one preventable cause alone—syphilis—amounts to $10,000,000 a year. Mental hospitals all over the land are burdened by the unnecessary load of the syphilitic insane, at a maintenance cost of $31,400,000 a year. No one knows the cost of treating America's 160,000 cases of cardiovascular syphilis. No one knows the cost to communities of caring for those disabled by cardiovascular syphilis or those made dependent by the 40,000 deaths from this malady."

In the Social Security Act $12,000,000 was authorized for the Public Health Service and the Children's Bureau to aid states in their public health efforts. Since that time 370 counties have established county or district health organizations and many of these have only skeletons of an effective organization, but at least the start has been made. They bring to 1,027 the number of counties which have a health service under the direction of a full-time health officer.

The provisions of the act in relation to public health are relatively simple. The act provides an appropriation of $8,000,000 a year to assist states, coun-

ties, health districts and other political subdivisions in establishing and maintaining adequate public health services, including the training of personnel. The act, moreover, authorizes certain regulations governing these allotments to be made by the Surgeon General.

The funds are distributed among the several states on three bases: first, population; second, special health problems, and third, the financial needs of the state.

The state budgets and plans for public health work are submitted by each state health officer. If those plans are reasonably adapted to the end in view and deal with a public health problem, the plans are approved without question. In other words, we have followed very definitely the principle of the maximum of decentralization in plans and programs for health work. Speaking generally, our Federal funds are being used to strengthen state and local public health organizations and to extend the benefits of full-time health services to many localities hitherto unable to finance them.

Many new health organizations have been established in the past year. Deficiencies in the organization of state health agencies have been supplied. The majority of state health departments have strengthened their local health administration. A number of states have added new units or sections for the promotion of industrial hygiene. The control of acute communicable diseases has been materially strengthened. Laboratory facilities have been augmented. Improvements in personnel and equipment for the handling of vital statistics have been made. Public health nursing has been strengthened. Special measures for the control of syphilis and tuberculosis have been started. More than that, a strong impetus has been given for the development of oral hygiene in many states, and special health problems peculiar to states or localities are being attacked. Examples are: trachoma in Missouri and Kentucky; rodent plague on the West Coast; malaria and hookworm disease in the Southern states and industrial hygiene in the industrial states. The states generally have used these funds to meet the particular needs which exist in each state.

Part of the appropriation given to the states is used for the training of personnel. There, again, the federal regulations are liberal. Ten per cent of the total allotment to each state is for the training of personnel for state and local public health work. About 1,200 people are receiving some kind of training under this section of the act. That includes not only the full-time medical officers who are in the schools of public health, at Johns Hopkins, Harvard and the others, but it includes many short courses of instruction for the directors of syphilis clinics, local infant and maternity hygiene programs and many other such types of work. Also, public health nurses, engineers and other public health personnel in considerable numbers are receiving this special training.

Continued investigations are being made of public health methods in various parts of the country in order, if possible, to appraise the relative effectiveness of various procedures and, as a result of such studies, to recommend more specifically the desirable practices in community health work. The research work which is being carried on is, we believe, one of the most important phases.

There are certain principles which we hope will be followed in carrying out these community health programs. In an earlier day, they were very simple, when the health officer dealt only with the problems of environmental sanitation. That day has passed, and we may as well recognize it. Our problems now are much more complicated. We used to be able to say, "The health

office deals with prevention. It puts chlorine in the water supply, sees that the milk is pasteurized and sees that the garbage is cleaned up, while the job of the rest of the medical profession is to treat disease." It seems perfectly apparent to any student of the subject that the major health problems of today are those diseases and conditions in the control of which treatment of the individual case is an important element. Tuberculosis, syphilis, cancer and pneumonia are examples.

So, inevitably, the public health officer now is concerned widely with the community facilities for the diagnosis and the relief of disease, as well as with environmental sanitation. That means he is brought more closely into relation with the medical profession. It means, too, that the medical profession has been brought more intimately into contact with the public health officer.

This increased area of contact, this increased scope of mutual interest between the practising physician and the community's collective effort to deal with health problems, naturally has resulted in many points of discussion and sometimes in differences of opinion and serious disagreements. The individual doctor practising medicine has been so busy keeping up with his own specialty that he has not had much time to keep up with the health problems of the community. Health officers too, must share the blame for lack of teamwork.

Now that we have a large area of common interest between the private practice of medicine and community health work, we hope that health officials everywhere will seek and can secure the full participation, the full cooperation and the full study of community health problems by the medical profession of every community.

Surgeon General Parran has presented his views in summary as follows: "I favor and advocate: first, the most complete application of our knowledge for the prevention of disease and death by joint community and professional effort against those diseases and conditions which are clearly recognized as within the sphere of public health service; second, the use of community resources to put better tools in the hands of the medical profession and thereby benefit the public health (pneumonia control work being one of many examples which might be cited), and third, the continued and more general use of tax funds to provide general and reasonably complete medical care for the dependent groups of the population."

A Few Considerations of Common Duct Stones

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In any consideration of Common Duct Stones it is essential to understand fully the anatomy and physiology of the biliary tract. This includes the gall-bladder and bile ducts. The gall-bladder and bile ducts, since they have a common origin, are identical in structure. They are lined with a layer of columnar epithelium which is covered by a thick layer of elastic connective tissue which makes up the bulk of the wall and provides its tensile strength. Outside this, in turn, is a coat of loose areolar tissue in which are bundles of muscle fibres, blood-vessels and lymphatics.

The papilla of Vater, at the end of the common duct, is largely composed of a bundle of circular smooth fibres, suggesting a sphincter. This is known as the sphincter of Oddi; its function is to guard the opening of the duct into the duodenum.

The function of the gall-bladder and the bile ducts is to take care of the bile in its passage from the liver to the duodenum. A marked dilatation of the hepatic and bile ducts follows the removal of the gall bladder. The two branches of the hepatic duct fuse to form the main hepatic duct. This in turn is continuous with the common duct. It is joined later by the cystic duct which drains the gall bladder. The common duct extends from the junction of the cystic and hepatic ducts in a downward and lateral direction for a distance of about five centimeters, to a point where, together with the pancreatic duct, it empties into the duodenum usually through a common orifice, the papilla of Vater.

For convenience of description the common duct is usually divided into three parts;

(1) that portion which lies behind the duodenum,

(2) that which passes behind and sometimes through the head of the pancreas,

(3) that portion included within the wall of the duodenum.

The common duct lies just behind the junction of the first and second parts of the duodenum. The hepatic artery lies just above and to the left of the portal vein immediately behind and between the duct and the artery. (Fig. 1) In its second part it lies in very close relationship to the pancreas, usually in a groove in its posterior aspect. The cystic duct may enter or join the hepatic duct at an angle of 45 degrees, or it may run parallel to the hepatic for one or two centimeters loosely bound to the hepatic duct by connective tissue, before it joins to form the common duct.(Fig. 2) This, sometime, close relationship of the cystic duct to the hepatic duct must always be in mind, in order to avoid injury to the hepatic duct.

The blood supply of the gall-bladder comes from the cystic artery, a branch of the right hepatic artery. The vessel is in close approximation with the cystic duct,—a fact that should always be remembered. It usually divides

Normal and Abnormal Arrangements of Bile Ducts and Blood Vessels

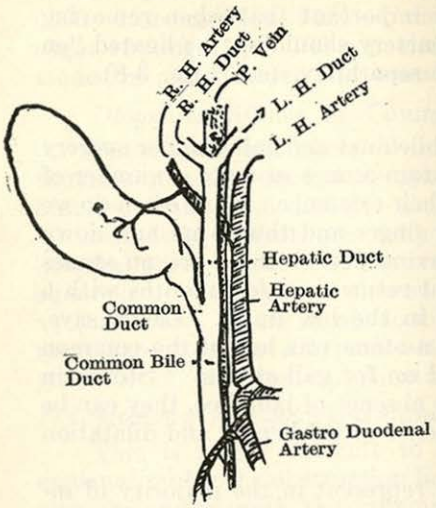

Fig. 1—The normal arrangement of biliary ducts, gall bladder and blood supply.

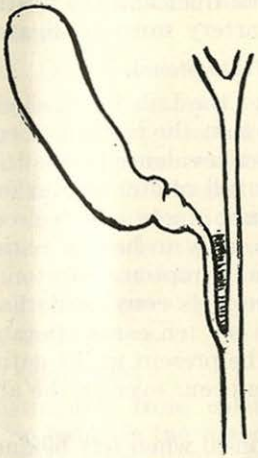

Fig 2—The hepatic and cystic ducts bound together for 2 or 3 cms.

Fig. 3—The cystic artery arising from the right hepatic (normal).

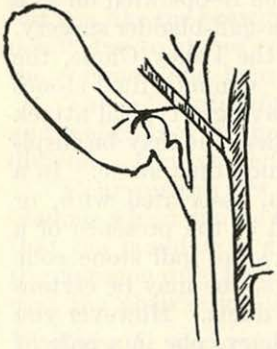

Fig. 4—The right hepatic artery crossing in front of the main hepatic duct.

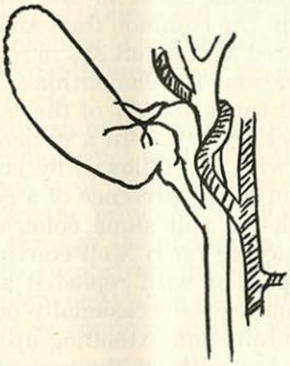

Fig. 5—Right hepatic artery arching over right edge of main hepatic duct.

Fig. 6—Cystic artery arising from the main hepatic.

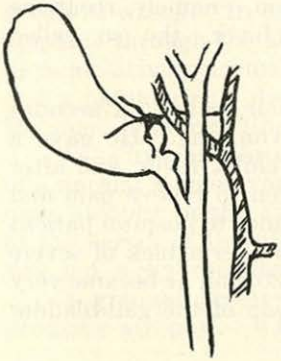

Fig. 7—Cystic artery arising from the left hepatic.

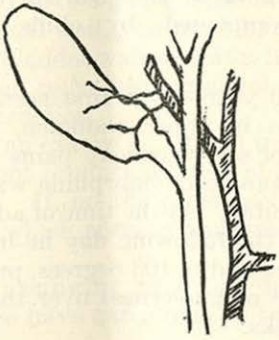

Fig. 8—Two cystic arteries arising from the right hepatic.

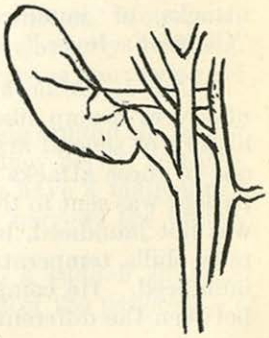

Fig. 9—Two cystic arteries arising from the left hepatic.

into two branches each supplying one side of the gall-bladder. It should also be kept in mind, that, not infrequently, anomalous distribution of these vessels is to be found. It is therefore very important that when removing a gall-bladder the cystic duct and the cystic artery should not be ligated "en masse." The cystic artery must be ligated separately. (see Figs. 3-8).

Incidence of Common Duct Stones.

The recent work at the Lahey Clinic on bile duct and gall-bladder surgery is convincing enough, that the bile ducts contain stones in quite a number of cases in which no clinical evidence points to their existence. How often do we remove a gall-bladder full of stones, run our finger and thumb up and down the common and hepatic ducts and feel convinced that there are no stones present in these ducts, only to have a patient return in a few months with a recurrence of pain and symptoms of stones in the bile ducts. Lahey says, "that prior to 1926 he feels convinced that a stone was left in the common duct, in one out of every ten cases operated on for gall stones." Stones in the common duct can be present in the entire absence of jaundice, they can be non-palpable, they can occur even in the absence of thickening and dilatation of the common duct.

Common duct stones, when left behind, represent in the majority of instances the original pain for which you did the operation. If you take out a gall bladder filled with stones and you leave a stone in the common duct, it might have been better not to have operated on the patient, because you have not relieved the condition causing most of the trouble. The mortality of cases where stones were left in the common duct and then re-operated on at a second stage is 10% as compared with about 3% in routine gall-bladder surgery.

In a series of 1803 operations for cholelithiasis at the Lahey Clinic, the common duct was opened 531 times or 30% of the cases—common duct stones were found in 258 of the cases or 15%. In a patient having a typical attack of gall stone colic associated with and followed by jaundice, one may be suspicious but by no means certain of the presence of a common duct stone. In a patient with repeated attacks of gall stone colic, each, associated with, or followed by jaundice, one may be fairly well convinced of the presence of a common duct stone. In a patient with repeated attacks of gall stone colic associated with fever and jaundice as occasionally occurs, one may be certain of a common duct stone with infection extending up the ducts. However you may see this latter condition but without the typical biliary colic in a patient with a purulent infection of the common duct and no stones.

Stones lodged at the papilla, blocking the duct, give rise to a peculiar train of symptoms, attributable to their ball valve action,—namely, recurring attacks of jaundice accompanied by chills and fever, the so called "Charcot's fever."

Case 1. Male aged 60 years—was first seen outside, called on account of severe cramp like pains in upper abdomen, and vomiting. He gave a history of several attacks of severe colicky pains with chills, fever, and after one of these attacks was jaundiced—morphine was given to relieve pain and patient was sent to the hospital. At the time of admittance to hospital patient was not jaundiced, but on the following day he had another attack of severe pain, chills, temperature elevated to 103 degrees, pulse 120, and he became very jaundiced. He complained of tenderness over the region of the gall-bladder between the different attacks.

Physical examination showed the patient quite obese—blood pressure 160/76; jaundiced since last attack—blood clotting time normal—W.B.C. 6500—Haemoglobin 75%—Urine examination showed 5% sugar—blood sugar 190 mgm. per 100 c.c. blood. A cholecystogram was done—it showed stones in gall bladder and common duct.

Diagnosis: Stones in Common Duct; diabetes.

Patient was not operated on because of diabetic condition, and in hope that his common duct stone symptoms might clear up sufficiently to allow him to combat the diabetic condition. He was started on Insulin, taking 40 units daily at first, gradually reducing the dosage, until when he left the hospital three weeks later he was only receiving 5 units twice daily. The common duct symptoms cleared up, and patient refused to be operated on at this time. There is no doubt he still has his duct stone. This case is mentioned to show a typical attack of "Charcot's Fever", also to note the presence of diabetes complicating gall stones.

Inflammatory Non-calculous Biliary Obstruction.

This is rather difficult to distinguish from calculi obstruction. The explanation for the obstruction lies probably in the association of pancreatitis and cholangitis with the inflammation in the gall bladder. There may be marked infection, subacute type, in the gall bladder; the infection extends to the pancreas and to the intra-hepatic biliary radicles; we get an edematous thickening of the hepatic and common duct. In these cases the head of the pancreas will be found enlarged; this is not the stony hardness of malignancy but it is like the brawny thickening of a smooth induration; that the obstruction is not due to stones can be determined only by most thorough exploration of the common and hepatic ducts.

The differentiation between biliary obstruction due to common duct stone and malignancy in the common duct or head of the pancreas is at times quite difficult. Courvoisier's law is of value in these cases.

Courvoisier's law is: In the presence of jaundice a dilated palpable gall-bladder which can be felt through the abdominal wall is indicative of the fact that the jaundice is due to an obstruction in the head of the pancreas or in the common duct from malignancy; while the contracted gall-bladder indicates that the obstruction is due to common duct stones.

What are the mechanics of Courvoiser's law?

Courvoisier's law may be wrong, but if one understands the mechanism of the factors that produce Courvoisier's law, they will then understand how it can be wrong. In order to have a gall-bladder which can dilate and can be palpable through the abdominal wall, you must have two factors; You must have arelatively normal gall bladder wall so that it has the elasticity to dilate, and a patent cystic duct; you must have gradual progressive narrowing of the duct producing the obstruction.

Take hydronephrosis as an example. If you tie a string around the ureter of a normal kidney, you do not produce dilation of the kidney pelvis, you produce atrophy of the kidney. If, on the other hand, you have a malignancy of the cervix of the uterus, which spreads and gradually narrows the ureter, you get a hydronephrosis.

A gradual progressive narrowing produces dilation; a sudden shutting produces atrophy. When we have carcinoma of the head of the pancreas we

usually have a normal elastic gall-bladder wall. This is the reason why the positive portion of Courvoisier's law is so valuable. With the gradual narrowing we have dilatation; we have jaundice, painless and progressive, and, in this case, exploration is justified. If the gall-bladder is dilated, even though the obstruction is due to malignancy, it is possible to anastomose that gall-bladder to the duodenum, to overcome jaundice and allow the patient to have comfort for weeks or months.

Now, what is the explanation of the fact that the contracted gall-bladder in the presence of jaundice is due to stones? It is due to the fact that when one has stones in the common duct there must have existed stones and infection in the gall-bladder over a good many years. That means repeated attacks of cholecystitis and with each attack a round cell infiltration of the wall of the gall-bladder which later becomes cicatrized. To sum up, if in the presence of painless and progressive jaundice, together with absolutely and persistingly acholic stools over weeks, there is in addition a palpable gall-bladder, then you may almost certainly make the diagnosis;—that the obstruction is due to malignancy and that the only thing that can be done for the patient is cholecyst-enterostomy. Again, we may have stones in the gall-bladder and bile ducts associated with a malignancy of the gall bladder and bile ducts as the following case illustrates.

Case II. Patient—a female aged 62—admitted to hospital with the diagnosis of choledocholithiasis. Patient has had gaseous indigestion for years but never had any serious illness.

Present Illness. Patient was well until two and a half months ago, when, following an attack of upper abdominal pain, with some fever and slight chills she became jaundiced; jaundice progressed steadily. She has had several attacks of colicky pain during the first two months. Urine became dark, stools putty colored—appetite failed—normal temperature. On admission to hospital the patient was very weak—complained of loss of energy. Bleeding time—five and a half minutes. Clotting time 3½ min. Van der Berg test slightly positive.

Cholecystography was not done on account of persistent icterus. Flat X-ray showed presence of large gall stones in the gall bladder and also in bile ducts. Gall bladder quite palpable—felt the size of a pear and was quite hard to the touch.

Impression—Cholelithiasis and common duct stones.

Patient was given glucose and saline, intravenously, for a few days before operation.

Operation was done under spinal and local infiltration. A good exposure was obtained through a right rectus incision. As soon as the abdomen was opened a large quantity of bile-stained fluid flowed out. The gall-bladder was found to contain several large stones but there was also an infiltrating mass involving the base of the gall-bladder and extending into the liver substance. The bile ducts were not visualized owing to numerous adhesions which we did not think it safe to remove. Nodules were felt throughout the liver substance. The abdomen was closed as quickly as possible.

In the above case we were quite justified in assuming that the patient had gall stones for a long time, and that the carcinoma developed secondarily.

Was it due to the chronic irritation of the gall stones? Possibly. It really makes little difference which is primary or which is secondary; the fact

that gall stones and cancer of the gall-bladder and ducts are not infrequently found together, would tend to cause one to commend the increasing frequency with which gall stones are removed as soon as possible after their discovery. It might also be noted that the tumor felt in this case was not due to the malignancy but rather to the large stones in the gall bladder.

There is a condition known as Biliary Dyskinesia, which may be difficult to distinguish from colic due to gall stones. This biliary colic may occur post-operatively, and we may think we have left a stone in the common duct. This biliary colic is due to a spasm of the sphincter of Oddi,—or spasm of the duodenal musculature. Morphine, unless given in a large dose, aggravates rather than helps this colic. Relief of the pain will be obtained in many cases by the administration of anti-spasmodics such as amyl-nitrate and glyceryl trinitrate. This type of biliary colic can generally be prevented by the moderate dilatation of the sphincter of Oddi at the time of operation, with a set of Bakes' dilators. This dilatation also assures the passage of any reasonable sized stones left in the common duct.

How shall we treat the deeply jaundiced patient pre-operatively, so as to diminish the likelihood of hemorrhage?

It is well known that hemorrhage is a very serious and often fatal complication in operations on jaundiced patients. There is much doubt as to the value of calcium treatment in the prevention of hemorrhage in obstructive jaundice. Ravdin finds that calcium treatment affects the coagulation time of the blood in rare instances only. Lahey claims that calcium is of no value in preventing hemorrhage or in stopping it when it has occurred.

The administration of glucose solution is definitely of value in these jaundiced people. A diet composed chiefly of carbohydrates is given these cases. Lahey claims that the best results are from the use of whole blood transfusions. In seriously ill patients who have a rapid sedimentation rate, and who he believes may bleed at operation, he gives a transfusion of whole blood the day before or the morning of operation. He prefers whole blood transfusion to citrated blood, as he claims to have stopped three cases by giving whole blood, when citrated blood failed. Why this should be he does not say.

When should the common duct be opened?

It is needless to say that if one can palpate stones in the common duct, the duct must be opened, the stones removed; the duct drained, or not, as thought advisable. However, palpation of small stones in the lower part of the duct is by no means easy, and in certain cases impossible. The fact that a considerable part of the common duct runs behind the duodenum and that in many cases the retro duodenal portion of the duct runs in the head of the pancreas, indicates how uncertain and unsatisfactory may be the palpation of stones in this region.

We might say that every thickened and dilated common and hepatic duct should be explored; also, in a patient with a seemingly normal duct, should examination reveal any thickening about the region of the ampulla, the duct should be opened and explored.

Should the common duct be drained in all cases?

At the Lahey Clinic in almost all cases when the common duct has been opened and a stone removed, a drain is left through the incision in the common duct. He uses the T tube, he claims that it is safe, is easy to remove, and that by closing it temporarily for a few hours at a time, three or four days preceeding

its removal one can be sure that bile is flowing into the duodenum. He also injects Brominol or Lipiodal, and visualizes the duct by X-ray, if it is thought advisable. He insists, infected common ducts should be drained for several weeks. On the other hand, some other prominent surgeons drain the common duct rarely. Frank Beall states that in twenty years he has sewn a tube into the common duct only twice. He says—"an excessive loss of bile from the body may have deleterious effects, and in a seriously ill patient, may turn the tide between success and failure."

Twenty five years ago, the noted surgeon Doctor Halsted, made this statement: "all we gain, as a rule, by drainage of the common duct is relief of tension. This relief is secured by drainage by way of the cystic duct and tends to secure prompt healing in the line of suture in the common duct. Aside from the deplorable condition brought about by the great loss of bile, it seems irrational to me to place a drain in the infected common duct, through the line of incision into it, with the expectation that primary healing of the wound will occur. Unquestionably, the entire line of suture contaminated inside and out with pus-producing germs, and further infected by the pressure of the tube has in many instances broken down."

When the masters disagree, it would be presumptuous on my part to voice an opinion. I have used Lahey's T tube several times, and I have also sutured the common duct, after removing stones from it, with success in both cases. However I firmly believe that if the common duct was closed after the removal of stones, the patient would in most instances have an easier, quicker, happier and safer convalescence.

Lastly, I might mention the question of anesthesia, for these deeply jaundiced patients. I think it is generally approved that spinal anesthesia, either alone or with local infiltration is the ideal anesthetic. Besides getting an easy, perfect exposure of the operative field, what is more important, we do not inflict further damage on already seriously damaged liver cells.

Conclusions:

(1) Know thoroughly the normal anatomy of the bile ducts and the blood vessels, so that you can always detect an abnormality.

(2) Mere palpation is often not reliable evidence as to absence of common duct stones.

(3) Infected ducts should be drained for several weeks.

(4) In the deeply jaundiced patient, thorough pre-operative treatment with glucose and saline, and if thought advisable, whole blood transfusions.

(5) A thorough exposure of the operative field is very necessary.

(6) In the seriously ill, spinal anesthesia is the anesthetic of choice. Ether will inflict further damage on already damaged liver cells.

Radiology and the General Practitioner

H. R. Corbett, M.D.

LITTLE did Conrad Roentgen realize, when he discovered X-rays in 1896, what an outstanding diagnostic aid had been created. In the early days of its growth, it was frowned upon by clinicians and relegated to the field of photography before taking its honored place in medicine and surgery.

As a matter of interest, patients who present themselves for X-ray examination, may be divided into three classes; first the patient who tells the doctor that she wants to have an X-ray examination and will not rest content until she has one—I cannot say whether this is due to the popular misconception by the laity as to the exalted properties of roentgen diagnosis or because her neighbor has recently undergone an examination. This is, very often, the type of patient who expects the roentgenologist to report the presence of a small ovarian cyst or a malposition of the uterus, in a five minute investigation. Then again, there is the patient who, suffering from some form of neurosis, has been a source of bother and worry to her physician. He as a last resort suggests an X-ray examination which strange to say, on being reported negative, greatly relieves her symptoms. The vast majority of our patients are referred by their physicians, who after complete clinical examination realize the necessity for X-ray and laboratory assistance in order to arrive at a correct diagnosis.

In general hospital practice, there is the usual run of routine work such as fractures and dislocations, presence or absence of foreign bodies etc., in which the clinical data is of minor importance to the roentgenologist as it also is in certain cases where the physician or surgeon asks for a "yes" or "no" report concerning the presence of urinary stone, diseased gall bladder. When a positive or negative finding can be placed on the chart along with the blood count and urine analysis, it is an ideal report in the minds of many and gives the surgeon carte blanche.

In another department of the hospital we may see a different picture. The attending urologist and his staff have their daily morning conference; cases are presented, history and clinical data discussed, laboratory reports examined, X-ray films reviewed and in the light of all this available data a diagnosis is made and treatment suggested.

The question therefore arises as to the time the roentgenologist can devote to routine work and yet remain a clinician and medical consultant. The clinical background is necessary at all times and close cooperation with the physician or surgeon in order to obtain the pertinent facts of the case, is absolutely essential.

When the roentgenologist is able to have personal contact with the patient, this is an added advantage and he is a true consultant in that capacity.

The importance of discussion prior to the examination cannot be overestimated. The most direct line of approach can be determined upon. Unnecessary X-ray examinations add to the cost of medical care and often delay treatment.

In abdominal conditions it is very essential to plan the examination based on clinical information supplied by the attending surgeon. Where an acute abdominal condition is suspected, two or three flat films may be all that are necessary to confirm the presence of perforation of a hollow viscus or to demonstrate findings consistent with intestinal obstruction.

The number of chest lesions found in routine fluoroscopic examination of chest prior to gastro-intestinal examination serves as a warning against indiscriminate ordering of X-ray films for conditions suspected below the diaphragm. Flat films of the abdomen prior to the routine gall bladder or gastric series may demonstrate an opaque urinary calculus or psoas abscess.

Prior to the advent of X-ray, the chest was the exclusive problem of the internist, just as the abdomen was to the surgeon. What would the old masters say if they could view the procedure adopted by some up-to-date United States public health units in chest surveys of school children! They would see an ingenious machine operating a roll of emulsion coated paper similar to a large camera and X-ray pictures of the chest snapped in rapid succession as children file past. Another mechanical device is used to unroll the processed film when viewed by the roentgenologist for diagnosis—verily a masterpiece of mass production and scientific efficiency.

There are few fields of diagnostic radiology which offer wider scope for furnishing accurate information to the clinician. In chest work the radiologist and internist are particularly alike—neither is able in 100% of cases to distinguish between the tuberculous and non-tuberculous. The radiologist is dependent upon a detailed history and certain clinical facts. There are some who feel that chest films should be interpreted without clinical data, in order to avoid prejudice. For a certain percentage of cases it is possible to give necessary information from an X-ray point of view alone.

The necessity for repeated chest films before establishing a diagnosis should be always kept in mind. In this regard the radiologist should follow the methods of the clinician who often delays his final opinion during a period of observation. A second film examination two or three weeks later, will decide whether the patient is tuberculous or non-tuberculous, and at a longer interval it will decide whether the tuberculosis is showing evidence of extension or retrogression.

The increasing use of roentgen diagnosis in industrial medicine makes it imperative that every facility should be utilized in order that a detailed and complete examination can be carried out in compensation cases under the supervision of trained roentgenologists.

W. Warner Watkins writing in the Journal of Radiology states: "Errors resulting from inadequate technic and inexpert interpretation may be grouped under four heads: (1) Examination too limited in scope, or actual lesion overlooked through inexperience. (2) Normal structures mistaken for abnormalities by surgeons unfamiliar with X-ray appearances. (3) Bone changes or evidences of injury of questionable relation to recent accident (the type of injury that gives the automobile insurance racketeers their opportunity). (4) Pathologic bone formations mistakenly interpreted as related to injury."

In this short article it is hoped that I have made clear the necessity for pooling the information gained from our diagnostic agents and sorting out that information before a final opinion is given. X-ray is only a link in the chain of diagnosis, and its strength as a link depends on how well it compares with the other links. We have reached the point where the physician is not satisfied with a report dealing with vague phraseology concerning shadows and densities—that report should be based on clinical terms and have a specific meaning.

Roentgen diagnosis has made rapid strides within the last decade—body cavities have been explored, technique perfected. Its advance in the future depends on the vision of the men who are a part of this specialty, as well as the confidence and co-operation of their medical associates.

Two Interesting Orthopaedic Problems

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Epiphyseal Coxa Vara.

Epiphyseal coxa vara is a comparatively rare condition, often late in being presented to the doctor, and one in which the prognosis, even when it is treated early, as regards a freely movable and painless hip, are uncertain.

Case: Female, age 14 years, weight 118 lbs.

Complaints: (1) Pain in the right knee and hip.
(2) Frequency.

Patient first had pain in the right hip one year ago. This was not severe, and did not incapacitate her in any way. She did not consult a doctor. Last December, while skating, she fell and injured her right hip. At the time she had great difficulty in getting to her feet and going home. When at home she rested for a day or two, and was up and around again. Ten days ago she presented herself at the office, complaining of a slight urinary trouble. She had frequency five or six times a day and nocturia twice at night. This was periodic in nature, and usually lasts for three or four days. It was noticed that she was lame, and on questioning she admitted having trouble in her right leg, but neither herself nor her mother seemed to attach any great significance to this, although she was obviously lame, had shortening of the leg, and was troubled with pain in the right knee and hip. She had no other complaints.

Physical Examination: Patient is a young girl, very much overweight, and of short stocky build. She walks with a limp, and the pelvis on the sound side drops when weight is borne on the affected limb. The right hip joint has restricted movements. Flexion is 40 to 50 degrees only, and abduction, medical rotation and hyper-extension are greatly restricted. Adduction and lateral rotation are free. She holds the leg in the adducted position, with the leg rotated outwards. The right groin on palpation has a fullness not present in the left. She has about 1″ shortening, with some atrophy of the gluteal muscles on the affected side. On attempting to abduct the leg, the adductor muscles go into a spasm. Movements of her right knee and ankle are normal. Physical examination is otherwise normal. Urinalysis is negative.

X-ray: X-ray shows the condition to be one of epiphyseal coxa vara, with considerable slipping at the epiphyseal line. The head of the femur is rotated slightly out of its acetabulum downwards. There appears to be firm union between the neck and head of the femur. The left femoral head and neck are normal. X-ray of the sella turcica is normal.

Operation: Sub-trochanteric Osteotomy—General Anesthesia. A straight incision was made, beginning at the great trochanter and passing down the lateral surface of the leg for a distance of four or five inches. The ilio-tibial band was separated in the line of its fibres. The vastis lateralis muscle fibres were separated and the shaft of the femur exposed at the level of the lesser

trochanter. The periosteum was elevated from the bone in this vicinity, and the bone divided transversely across with an osteotome. The leg was then abducted and medially rotated at the site of the bony division. The periosteum was sutured, the muscles allowed to come together and the skin edges closed with half-a-dozen silk worm sutures. The leg was then put in a Thomas's splint and five pounds weight attached by means of adhesive strapping to the leg. A control X-ray taken the next day showed the abduction and rotation to be satisfactory.

Commentary: The age at which the slipping of the epiphysis occurs is from 10 to 16, sometimes earlier in girls. The etiology of this condition is still obscure. Earlier, adolescent rickets was thought to play a role. Royal Whitman still holds in part to this theory. Kienbock believes the cause to be a disturbance of the endocrine system, especially the adiposa genitalis type (juvenile hypophyseal malacia of the neck of the femur). Among the recent and more interesting theories as to the cause from an anatomical viewpoint are those of trauma and static influence. No doubt these are important factors in the development of epiphyseal coxa vara. It would appear that some pathological process causes loosening of the epiphysis, but what is not definitely known. It will be remembered that in childhood the periosteum of the femoral neck is thick and thrown into folds, called retinacula of Weitbrecht, and these hold the head in place. It is the atrophy of these retinacula at the approach of adolescence which produces the weakness at the epiphyseal line.

X-ray of the condition is characteristic in the advanced stages. Brailesford describes a pre-slipping stage, and in this stage two things are characteristic:—

(1) Increased density of the metaphyseal edge of the epiphysis and metaphysis.

(2) Wooliness of outline of the extremity of the diaphysis.

One other interesting X-ray feature is that it is the only epiphysis in the body which does not carry a spicula bone with it at the time of displacement.

An enlargement of the sella turcica has been reported in a few cases.

Treatment: In the early traumatic cases traction in the position of adduction is advised by Wardle. Using Jones' spinal frame for this purpose for a period of 2 or 3 months, controlled by X-ray, and to be followed later by the use of a walking caliper for a year, seems to offer the best hope of recovery. I have used this method twice, and have been well satisfied. In later cases when union has not yet occurred, I think it is generally agreed that open reduction using the Smith-Peterson anterior approach is advisable, and the head may be mechanically fixed, although some of the continental clinics (Bohler) think that it is too late to attempt the open method after four weeks, because of the danger of further trauma to the joint. In later healed cases the sub-trochanteric osteotomy is satisfactory, as it will correct the lateral rotation and adduction and overcome some of the shortening.

What about the other hip? It should be remembered that the same etiological factor which caused the epiphysis in the first hip to slip is still at work until the age of twenty. Although the condition is said to be bilateral only in 1 to 40 or 60 cases, it is of great importance during treatment to adequately protect the sound hip from a similar fate. Mr. Cochran of the Princess

Margaret Rose Orthopedic Hospital, Edinburgh, always attaches great importance to this, and says that he is not afraid of the corrected slipped epiphysis giving out again, but what he does dread is that the sound hip may slip also unless protected. .

Osteochondritis Dessicans.

Osteochondritis dessicans is a condition in which a fragment of articular cartilage with or without sub-chondral bone becomes either partially or completely separated at a characteristic site on the articular surfaces of certain joints.

Case: Male, aged 23 years.

Complaint: Periodic attacks of swelling and pain in left knee.

Patient suffered a direct blow with an iron bar on the lateral side of the left knee with the knee in the acutely flexed position, in August 1937. This knee was painful and swollen for a time, but he eventually recovered and was able to go back to work. No X-ray was taken. Since that time he has had periodic attacks of synovitis in the left knee, and has had to lay off work for a few days. The left knee has never felt strong since the accident, and he has had to favor it, although it has never been wholly disabled. In June 1938 an X-ray was taken of the knee, and it showed that he has sustained a fracture of the articular surface of the medial condyle. This is probably of the nature of an osteochondritis dessicans. It was noted that the patient had no instability of the knee. All movements are normal, and there is no wasting of the quadriceps to note. There is no synovitis present now, and no areas of tenderness, nor any bony or cartilaginous prominences. An X-ray taken in August 1938 shows conditions to be much the same, therefore arthrotomy was advised.

X-*ray*: X-ray of the left knee shows an osteochondritis focus on the medial femoral condyle. The bony fragment is not completely separated. There are no loose bodies present. Early arthritic changes are noted.

Operation: Arthrotomy of the Knee Joint—General Anesthesia.

Under general anesthetic, with a tourniquet applied to the thigh, a patellar displaying incision after the fashion of Timbrell-Fisher was carried out. This incision extended from 4″ above the upper border of the patella to 2″ below the lower border of the patella on the medial aspect of the joint. The quadriceps expansion was cut through in line with the skin incision, and then the synovia of the joint was opened. The synovial opening was extended into the supra-patellar pouch above and down to the upper border of the patella. The patella was then displaced laterally and the interior of the joint examined. There was a fragment of necrotic bone about one-half the size of a lima bean, partly attached at the anterior extremity, but broken away from the lateral surface of the medial condyle above the anterior attachment of the posterior cruciate ligament. This fragment of bone was removed and the cavity bevelled off smoothly. The interior of the joint was then examined. Both menisci and cruciates were intact. There were no other fragments of bone present. The patella was examined, and found to be healthy. There was no evidence of arthritis in the joint, but there was synovitis present. The synovis and capsule of the joint were closed with continuous sutures, No. 00 catgut being used for the synovia, and No. 1 for the fibrous capsule. The skin wound was closed with silk worm gut sutures. A firm bandage was applied to the knee, the tourniquet removed, and the patient returned to the ward.

Commentary: Osteo-chondritis dessicans most commonly makes its appearance in the healthy robust athletic type of young man. The etiology of the condition is still somewhat of a mystery, and from time to time many theories have been advanced, only to be discarded with the advent of newer evidence regarding the condition. The earliest theory was that of quiet necrosis as advanced by Paget and Konig. This quiet necrosis was presumed to be preceded by trauma. The generally accepted view to-day is the traumatic theory which is given able support by Fairbanks and Timbrell-Fisher, and indeed trauma is always a feature of the history of these cases. Following trauma one of three things may happen—

(a) Sub-chondular fracture.

(b) Damage to a vessel or vessels supplying a portion of the articular surface with subsequent separation of the part.

(c) Post-traumatic inflammatory condition.

In the knee it is always the medial condyle which is affected. The reason for this is not clear. One probable cause advanced is the fact that the medial tibial spine is usually longer than the lateral one, and this spine enforced rotation of the tibia on the femur is responsible for the constant position of the pathological process. In our own case it would appear that the patella had caused the damage, because with the knee acutely flexed the medial spine of the tibia was well away from the site of injury.

Pathology: The pathological appearance in our case is not typical, as it was necrotic, and of an indefinite outline, whereas the detached fragment is usually oval and possesses plain and convex surfaces.

Treatment: A few years ago Hellstrom advised removal of this detached or semi-detached body, and that is the treatment advocated to-day. The earlier the diagnosis and the earlier the removal, the better chance the patient has of avoiding arthritic changes in the joint later in life, although some writers believe that the patient is doomed to arthritic changes whether the loose body is removed or not.

I am grateful for the co-operation of Dr. B. F. Miller in diagnosis and treatment of these conditions, and to Dr. J. C. Morrison for his interest.

Diphtheria Immunization, with Special Reference to the Local Campaign*

L. M. Morton, M.D.,
Yarmouth, Nova Scotia.

IT is a quarter of a century since Behring in 1913 first introduced his toxin-against diphtheria. In 1923, ten years after Behring's discovery, Ramon antitoxin mixture, the medical profession has made use of immunization proposed a modified diphtheria toxin called by him "anatoxine" and generally known as diphtheria toxoid or anatoxine-Ramon. This toxoid has been found to be more efficient than alum-precipitated diphtheria toxoid which was first prepared in England in 1926. Three doses of anatoxine-Ramon at intervals of three weeks give results vastly superior to those obtained by using one dose of alum-precipitated toxoid both in respect of immunity response and duration of immunity. Hundreds of thousands of cases have been immunized and no valid objections to the use of toxoid have yet been sustained; on the contrary, its generous use has been followed by a very great decline in morbidity and mortality.

In Toronto 49,000 school children given three doses of toxoid were observed over a five-year period, 1927 to 1932. There were no deaths from diphtheria in this group, and only one has been since reported, in 1935.

As a result of work done during the past twenty-five years there is general agreement that at the age of six months to one year the great majority of infants are susceptible to diphtheria. Since the Schick test is all important in informing the physician whether an individual is immune or susceptible to diphtheria, either before or after immunization, it is essential that the Schick-test toxin be carefully controlled and standardized. Otherwise, utmost confusion and erroneous conclusions will be the result. According to Dr. J. G. FitzGerald, Toronto, the Schick test as a routine procedure need not be carried out in children between the ages of six months and six years under ordinary circumstances. After immunization it is often desirable to Schick-test children as it is a well-established fact that permanent protection is not always obtained—and the degree may vary in different individuals and with the immunizing agent used.

Practically all the diseases that we are called upon to treat have a multiplicity of remedies and methods of treatment suggested, none of which are specific and positive as to cure. Diphtheria is an outstanding example of a malady for which we have a positive cure in antitoxin and practically a positive preventive in toxoid. Why is it a fact that diphtheria was the chief cause of death in the age-group of 2 to 14 years in Canada in the period 1920-1930? Why were there 201 deaths in Nova Scotia from 1927 to 1936? Surely the blame cannot be passed on to the laity. Must our citizens strive to cure themselves of diphtheria as they do from other maladies with spurious drug-store nostrums? We have a greater responsibility in the treatment of diph-

*Presented before a joint session of the Canadian Public Health Association (twenty-seventh annual meeting) and the Nova Scotia Health Officers Association, Halifax, June, 1938.

theria than in any other disease, for if ordinary medical skill and knowledge are applied, both prevention and cure are practically certain. Of course we have all lost cases of diphtheria and there will be the occasional case that we may not be able to save in the future if we still have diphtheria. If immunization is not universally carried out routinely and made as important as vaccination against smallpox, we will continue to have cases of diphtheria to treat and the undertaker will have cases to bury.

The first record of the use of toxoid in Nova Scotia dates from 1927, when 200 school children were immunized in Wolfville. In 1928, at Dominion No. 6, 300 children received toxoid and in 1929 this work was started in Yarmouth and North Sydney. During 1930, a number of cases were immunized in Whycocomagh, and in New Glasgow immunization has been consistently carried on since 1931. Last year nearly 10,000 children were treated in Cape Breton County—so that Nova Scotia is really taking up the work seriously although toxoiding is not universally popular.

My interest in diphtheria immunization dates from 1923, while spending some time at Johns Hopkins Hospital, Baltimore. The Department of Hygiene at that time was putting on a campaign of immunization in the city of Baltimore. However, it was not until 1928, as medical officer of health of the town of Yarmouth, that the time seemed opportune to interest our local citizens. Dr. Jost, then Provincial Health Officer, promised every possible assistance and stated that all toxoid would be supplied by the Department free of charge.

Early in 1929 I went before the Town Council and explained the idea of immunization. I met with a very cold reception. One of the members, a doctor, advised strongly against it. He said it was only in the experimental stage, dangerous and unsafe. Three months later, in May 1929, we had an epidemic of diphtheria and during the four succeeding months sixty cases were reported, with two deaths and two cases of laryngeal diphtheria saved by tracheotomy. This seemed to be my opportunity. The Town Council, like Pharoah of old, had refused me permission before, but now I could proceed with my experiment provided no additional financial obligations would be entailed.

My campaign was launched the latter part of August at the beginning of the school term and the following procedure was carried out:

(1) The local press published several articles, which I provided, regarding the seriousness of diphtheria and the wonderful benefits of toxoid.

(2) The manager of the Metropolitan Life Insurance Company secured an educational film on diphtheria immunization and this was shown daily at the local theatre free of charge. Also, the Metropolitan agents carried literature into every home they visited and explained the advantages of toxoid to all their clients.

(3) Consent slips were distributed to all school children to be taken home for the parent's signature.

(4) With the co-operation of the district health nurse, a Saturday morning clinic was established at the Health Centre. This clinic was at once a success.

A record was kept of each child immunized: name, age, address, date, reaction, etc. As many as 95 were treated in one morning. There were no serious reactions and, with only three or four exceptions, every child returned

for the three injections. During August and September 495 children were given full immunization.

This work has been carried on ever since by succeeding medical health officers and not one case of diphtheria has developed in a child receiving three doses of toxoid. Today diphtheria is a rare disease in Yarmouth. Only one case was reported last year.

In conclusion, diphtheria is still a menace. Diphtheria can be controlled by toxoid. In the light of our present knowledge, arguments to the contrary are ridiculous. Deaths from diphtheria today are evidence of failure to apply well-known measures of prevention. Who is responsible? It must be placed on our local and provincial health authorities. The public must be educated to the point that they request immunization. The profession also must be educated. My personal experience has been that the Provincial Department of Health is always ready and willing—yes, and eager to give every assistance in health matters generally. A considerable number of members of the medical profession are not co-operating in this effort to prevent diphtheria. Why this apathy and *laissez-faire* attitude? Our responsibility is 100 per cent immunization of our school children, nothing less. The press, the school, the church, the women's organizations, the service clubs, are all available for educational purposes.

We have made progress in the past ten years but I am certain no conscientious and progressive physician is satisfied with present results. My plea is that the profession will give this problem serious consideration.

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BANTING LOOKS US OVER

WELL, Dr. Banting has come and gone. His first visit to Nova Scotia, he told us at the meeting at the Public Health Clinic on Tuesday night. If any of us entertained a grievance that his visit was long overdue, the passing reflection was quickly lost in the genuine pleasure of having him at last in our midst.

We, of the Bluenose tradition, are not an overdemonstrative stock. Setting aside the noise we are reputed to make during an election, we take most things in our stride, which includes, of course, visits of distinguished people. Dr. Banting is a Knight, which is a kind of a pity, since it may tend to dazzle and hide the humility ever associated with true genius. Quite a few of our plebeian tongues were heard fumbling between the Banting and the Sir Frederick the other night. But the Banting straightforward directness of speech, the simple saneness of the thought and the warm exposition of truth for truth's sake would quickly melt through the closed armour of his predecessors of old, and reveal the real Banting, him who brought honour on our profession and left the whole world forever his debtor. Let it be at this, lest indeed we seem hero worshippers and lose Dr. Banting's respect, in consequence.

What was the Banting mission here? What impressions were formed by members of Faculty and students? Did all concerned, meaning of course the Faculty and students, need his suggestions and quiet admonitions badly —and how badly?

Interested listeners among teachers and students will answer these and other questions for themselves. The writer of this editorial will do the same, and hopes to find himself in accord with the majority. If not, he would ask Dr. Banting to do some research on his head; and failing satisfactory causes there, to carry the investigation to the dissentient majority. The essential message in Dr. Banting's talks, then, was a quiet rebuke to the ever growing habit of medical schools of stuffing the curriculum; of confounding real education with piling into our students' heads more or less assorted knowledge

someone else acquired for them by the very elementary process of thinking, observing, testing, concluding. Once you make the student's brain a vast tenement for ready made opinions, he is not likely to exert himself much beyond collecting the rents.

Hippocrates knew the essential relations between knowledge and research, and between the latter and the art of thinking straight. I submit, with considerable temerity, that we are turning out more graduates of superabundant knowledge than we are of those whose minds are trained to make known facts do their full share in finding new ones. Even if the new ones are never found, the quest itself is worth while. Jason never found the Golden Fleece, but he learned lots about navigation and geography in the effort. The doctor that makes an enclycopedia of his memory and proceeds to a diagnosis by trying to pigeon-hole clinical data under A, B, C, D, etc., is the type that will always be learned, but seldom wise. We have all known this erudite product. It was said of the Bourbons that they never forgot anything, and they never learned anything. They ended badly. We should not copy them. Knowledge is not, in itself, wisdom. Degress, regardless of their raids on the resources of the alphabet, or even brilliancy in our conventional examinations, will not make a sound doctor, unless the courses of training behind those visible peaks have taught the student how to think straight.

Dr. Banting's appraisal of the degree lust was expressed so well at the meeting that it will stand repeating. To an enquiry from the floor as to how well the Research Department qualifies the student for a degree, he replied: "we take qualified students, give them work to do and proper facilities for carryng it on; we interfere as little as possible. I never ask a student to do an experiment; he is on the job, not me; after observing hm and his work for about two years, we keep him if he has real talent, but if he has not the right stuff in him, we recommend him for a degree, and, if possible, pass him on to some other institution." Surely, this bit of real eloquence indicates clearly the difference between pursuing and capturing truth for its own sake and taking snapshots of it, on the run, while the dominating purpose of the student is focussed on a degree. Every teacher of medical students knows how hard it is to get the student into a normal thinking poise when an examination is near and the cramming habit is on.

I suppose a certain amount of this is necessary, and must go on; but, if the spirit of research, independent thinking, could be woven into those imperfect structures of educational technique, much, if not all of their imperfections could be eliminated. And I believe this is one of Dr. Banting's impelling thoughts. He knows the real genius of research alights only at odd times, and the favoured mortal, perhaps Dr. Banting might call him the victim, never knows a restful day again. Like the Ancient Mariner he feels the things he must do and may not resist the urge. There were persons of his day that believed Pasteur was possessed of a demon when, as a matter of fact, it was the gentle genius of research driven to turbulence by human stupidity.

Dr. Banting knows that even at Dalhousie, the real research minds will be either few or none at all. But you are a perfectly proper fisherman if, while trying hard for the big ones, you succeed in landing a number of the smaller and assorted sizes. To keep the practice of cause-hunting warm and active in every department of the medical course—that's the idea behind Banting's mission here, if I interpret him aright. Cooperation of clinical

and non-clinical departments was urged to this end. The establishment of a definitely organized department of Research at Dalhousie was not advised. Rather let the small leaven of research work in the whole Faculty and student paste until the whole is leavened. When this happy consummation comes, we shall send a Nova Scotia Banting to Toronto with some nourishing morsels of our great product as a slight token of our gratitude for the inspiration and guidance recently received from our very welcome and distinguished visitor.

G. H. M.

(From *The Chambered Nautilus.* By Dr. Oliver Wendell Holmes.)

Thanks for the heavenly message brought by thee,
Child of the wandering sea,
Cast from her lap forlorn.
From thy dead lips a clearer note is born
Than ever Triton blew from wreathed horn:
While on my ear it rings,
Through the deep caves of thought I hear a voice that sings:—
Build thee more stately mansions, O my soul,
As the swift seasons roll;
Leave thy low-vaulted past;
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea.

CASE REPORTS

Hypernephroma of the Kidney.

Mrs. C. R.—A well nourished young woman, nulliparous, on May 15th, 1938, was seized with an attack of severe suprapubic pain, accompanied by a desire, but inability, to urinate. She was relieved by a hypo. of morphia and shortly afterwards voided some large blood clots. This occurred several times during the following week, with intervening days of clear urine and no pain or frequency. With the administration of haemostatic serum the bleeding stopped. Then the patient was taken to the hospital on May 23rd and X-ray examination made.

A flat plate did not show any pathological change of the G. U. Tract; a Uraselectan picture showed as follows:—"The right kidney failed to show concentration of dye, while the left was normal. The right kidney also showed slight dilatation of its pelvis and the presence of a small circular area of lessened density within the mid-portion of pelvis, rather suggestive of a small non opaque stone, the superior calyx rather blunted, other calices showed fair cupping and right ureter showed slight degree of dilatation." A few days later a retrograde pyelogram was made and a cystoscopic examination of bladder showed no pathology of bladder. 3 c.c. of 40% Sodium Iodide injected bilaterally revealed a somewhat similar picture to that of the uraselectan —normal filling of the left kidney, but poor filling of middle and upper calices of right. 2 c.c. more into the right showed persistent filling defect due to extrinsic pressure rather than inflammatory change and the circular shadow did not appear.

There had been no rise of temperature. No tenderness at costo vertebral angles and neither kidney could be palpated. There was no lumbar pain, the urine from left kidney was normal, from the right showed numerous red blood cells and some leucocytes. The only discomfort was when clots collected in the bladder and blocked the urethra.

The symptoms having cleared up the patient went home and during summer gained some weight and between this time and Sept. 1st she felt well, except that on two or three occasions a small amount of blood tinged the urine.

About Sept. 18th., 1938, there was a return of the blood clots with retention and suprapubic pain, this attack was much more severe than the first, a large quantity of blood was passed. She returned to the hospital, as it was decided to explore the right kidney. This was done through a loin incision—the fatty capsule was not adherent. On exposing the kidney its surface showed a peculiar mottled appearance, like minute hemorrhages under cortex, and a mass could be felt between upper and middle third—rounded and firm—scarcely as large as a plum. The pedicle was cleared, ligatured and kidney removed. A tube of rubber dam inserted to stump and wound closed in layers.

The pathological report by Dr. Ralph Smith is as follows: "At one pole of kidney is a papillary adenomatous growth the size of a walnut which has infiltrated the pelvis and extended just beneath the cortex, an early hypernephroma of papillary type. The rest of the kidney showed many haemorrhagic abscess areas from a simple ascending suppurative pyelonephritis."

The convalescence was uninterrupted, patient was discharged from hospital on October 8th., the wound healed.

The case presented difficulty in arriving at a definite preoperative diagnosis as to the cause of the bleeding; because of the absence of findings and the X-ray report. What suggested itself was the presence of a papillomatous growth in the kidney pelvis such as one more frequently finds in the bladder.

JOHN J. ROY, M.D.
Sydney, N. S.

Henoch's Purpura Simulating Acute Appendicitis.

Among the non-surgical conditions, resembling acute abdominal disease, is that of Henoch's Purpura, which occurs chiefly in children.

Cases of Henoch's vary with regard to the signs and symptoms and among others the following are given—fever, malaise, vomiting, diarrhoea or marked constipation, abdominal (colicky) pains, tenderness and rigidity, passage of blood by mouth or by rectum, moderate leucocytosis, purpuric, urticariae, or erythematous skin rashes.

The underlying pathology, of course, is the haemorrhage which occurs under the skin, submucous and subserous layers of the bowel.

Case Report.

Mr. D. C., age 16.

February 3. For the past two days patient had been complaining of abdominal cramps.

February 4. Abdominal cramps still present, also vomiting; tenderness and rigidity noted over the right lower quadrant. A few haemorrhagic spots around the ankles, but from the surroundings I put them down as flea bites. Tentative diagnosis; acute appendicitis.

Patient was removed to the hospital. Urine was negative; W.C. Count 11,000. That evening he developed an erythematous rash around his neck which caused me to reconsider wheth r the haemorrhagic spots were flea bites or real purpuric spots. I called in Dr. L. R. Meech on consultation and in the presence of the leucocytosis, vomiting, tenderness and rigidity in the right lower quadrant we decided that on the morrow we would operate.

February 5. The operation disclosed a comparatively innocent looking appendix, but the mesenteric glands were enlarged and inflamed. We removed one and the subsequent pathological report stated—"simple chronic inflammatory hyperplasia".

February 6-7. Patient feeling fine.

February 8. Abdominal pain and vomiting reappeared together with numerous purpuric spots on both arms and legs.

February 10th. Abdominal pain disappeared; rash still present.

February 11-16. Patient up and around; rash gone.

February 17. Patient again has vomiting spell and rash reappears.

February 20. Patient passes bright red blood per rectum.

February 25. Abdominal pain reappears accompanied by rash.

February 28. Abdominal pain had been absent for a few days, and feeling strong he was discharged with rash still present.

March 15. Patient well, no sign of rash.

Babcock states that this condition has been repeatedly mistaken for appendicitis. I think this case may be added to the previous ones of mistaken identity.

A. PHILIP MAGNOT, M.D.,
North Sydney, N. S.

Society Meetings

The Annual Meeting of the Association of American Medical Colleges

THE forty-ninth annual meeting of the Association of American Medical Colleges was held at Syracuse, N. Y., during the week of October 24th. Dr. H. G. Weiskotten, Dean of the Syracuse University College of Medicine, and his Faculty were hosts.

The meeting began with a brief history of Syracuse Medical School by the Dean. The story was similar in many ways to the development of our own school, beginning in a humble manner and steadily improving and expanding up to the present time. The last great advance at Syracuse, the erection of the new medical building, complete and modern in every respect, at a cost of over $1,500,000 was made possible through federal money. Let us hope that some of our medical statesmen at Ottawa initiate something similar!

The first paper "Future of the Public Health Movement" was given by Surgeon General Thomas Parran. It was most comprehensive and inspiring. The subject matter stressed the importance of sound teaching in Preventive Medicine; the more widespread application, especially in rural areas, of the knowledge we now possess in disease prevention; the need for more hospitals in rural areas; more research on the etiology of the diseases of later life, in particular cancer and cardio-renal conditions; and the urgent need for some form of adequate medical service to the "lower third" who never have and never will be able to pay for it. It was indeed most encouraging to hear the official head of the Department of Public Health of the United States deliver such an address.

Following this came a series of addresses on the teaching of preventive medicine by Drs. J. G. FitzGerald of Toronto, W. G. Leathers of Vanderbilt, Frederick F. Russell, formerly director of the International Health Board of the Rockefeller Foundation, and Harry S. Mustard of New York University. Dr. FitzGerald, from his experience of many years teaching and with the knowledge recently gained in his survey of every medical school in America and Europe outlined what he considered the course of teaching in preventive medicine should comprise. He warned against attempting too much, yet stressed the importance of a comprehensive course given by earnest, well trained teachers. The importance of making arrangements with official bodies such as city, county and provincial health departments for teaching purposes was mentioned. The good derived by the students visiting patients in the home was also referred to. Dr. Leathers emphasized the need of a preventive attitude on the part of the whole faculty and told how at Vanderbilt the Department of Preventive Medicine was consulted quite frequently by other departments. Home visits and field work, under supervision, were also considered most valuable by him. Dr. Russell, known to all especially by his work on typhoid vaccine, spoke next. His contribution, a most scholarly one, was comprehensive, pointing out the need for sincere and thorough teaching. Dr. Mustard told of the arrangement of the New York University Medical School with the city.

On the evening of the first day a dinner was held. Dr. Alan M. Chesney, Dean of Johns Hopkins University, Medical School, presided. A short address of welcome was given by the Chancellor of Syracuse University, William Pratt Graham. A unique and delightful part of the banquet was the music provided by the "Medical Alumni Orchestra". They rendered with much spirit the "Light Cavalry Overture" and for the second number the "Scarlet Mask Overture".

On the second day the topics were "Home Visits" and "The Teaching of Syphilis". The latter was read by Dr. Joseph Earl Moore, Associate in Medicine, Johns Hopkins University. He referred to the ineffective manner in which this disease was treated some twenty years ago and compared the teaching in that subject today with the treatment of that time. He suggested a Department of Syphilis in which the student should receive his instruction; such a department to be headed by a well trained and experienced physician, having attached to the department such consultants as skin specialists, neurologists, etc. Dr. Moore made an excellent case of the need of teaching the student that syphilis is a systemic disease manifesting itself by lesions in any or practically all of the organs of the body.

The value of having the students visit the homes of the patients was dealt with by G. Canby Robinson of Johns Hopkins, Henry E. Melenby of Vanderbilt, Ira C. Hiscock of Yale, G. Lombard Kelly of Georgia and Joseph H. Pratt of Tufts. It is sad indeed to think that in many medical schools the purpose of the course of instruction is not kept in mind when the curriculum is drawn up. One speaker emphasized the fact that in general practice only ten per cent of the patients were treated in the hospital, whereas in most medical schools all the clinical training was received, either in the hospital or outpatient department. Another speaker suggested that perhaps the inability of the present day medical student to "see what he looks at" and "feel what he palpates" was due to the over emphasis placed on hospitals and clinics. The humanizing influence of home visits was also pointed out. In Georgia, under the direction of Dr. Kelly, the final year students have been serving as assistants to the staff of the outpatient department for the past ten years. The students visit the homes, diagnose and prescribe, under supervision. In Boston an arrangement between Tufts Medical School and the city allows the students to act as assistants to the district city physicians. This scheme has been in operation for a number of years and is apparently working well. Nova Scotia has not been asleep in this respect. I believe the pioneer in this field was the late Dr. W. H. Hattie, who put such a scheme into operation at Dalhousie in 1920.

The last day was taken up with the educational side of child research, clinical clerkships, interneships, obstetrics, heredity, and a paper on aptitude scores. All the papers were scholarly, although the topics perhaps not so interesting as those of the two previous days.

The meeting was completely successful. There was no rush as only the mornings were used for the sessions. In the afternoons one had the opportunity to enjoy interesting and educational hospitality. Dr. Zapffe deserves all credit for the arrangement of what was generally conceded one of the most useful and pleasant meetings in the history of the Association.

H. G. G.

Western Nova Scotia Medical Society

The Regular Fall Meeting of the Western Nova Scotia Medical Society was held on the evening of November 9th in the Grand Hotel, Yarmouth, N. S., at 7.30 p.m., with the president, Dr. G. V. Burton presiding. Twenty members were present. The regular scientific program was preceded by a dinner which was thoroughly enjoyed by all those in attendance.

The scientific program consisted of two papers:

"Psycho Therapy in General Practice", by Dr. A. B. Campbell of Bear River.

"Hypertensive Heart Disease", by Dr. Thomas A. Lebbetter of Yarmouth.

Both these papers proved instructive and were enjoyed by the meeting. Discussion followed in which Doctors Webster, Farish, LeBlanc, Fuller, Williamson, and the president joined.

Following a hearty vote of thanks to the speakers, meeting adjourned.

The School-Child's Breakfast

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum, Mead's Cereal cooked and dried. Six times richer than fluid milk in calcium, ten times higher than spinach in iron, and abundant in vitamins B1 and G, Pablum furnishes protective factors especially needed by the school-child. The ease with which Pablum can be prepared enlists the mother's co-operation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature. Its nutritional value is attested in studies by Crimm *et al* who found that tuberculous children receiving supplements of Pablum showed greater weight-gain, greater increase in hemoglobin, and higher serum-calcium values than a control group fed farina.

Mead Johnson & Company, Evansville, Indiana, will supply reprints on requests of physicians.

Abstracts from Current Journals

SURGERY

Howley. *Journal of Bone and Joint Surgery.*

The writer describes a new bone plate for bone plating which would appear to have decided advantages over the old plate. This plate has a flange which fits securely into a groove cut in the bone and is fitted by long screws which penetrate the entire bone diameter; any projecting ends cut off if necessary. It appears to offer a more secure apposition of the bones as there is practically no possibility of the plate becoming loose or bending.

Hodgen and Frantz. *Journal of Bone and Joint Surgery.*

Subcutaneous tenotomy of tendo-achilles. This article is based on the findings of the clinic and a questionnaire to many general surgeons and orthopedic surgeons. Their conclusions are that subcutaneous tenotomy of the tendo-achilles should be abandoned, as the functional results are often bad, leading to atrophied gastrocnemii, a thread-like head cord and a pes cavus.

The writers are firmly convinced that subcutaneous tenotomy should be replaced by stretching of the under achilles, with application of a Plaster of Paris cast and bone surgery on the feet. In their clinic, this method has given more satisfactory results.

Shelly. *Archivel of Surgery.* **Chronic Appendicitis.**

A very interesting and comprehensive article, the conclusions of which, if adopted, would bring surgery of the appendix in less disrepute. Emphasis is laid upon *exact diagnosis*, especially in women. A careful history of the patient should be taken culminating in as exact a differential diagnosis as possible, elimination of the viscerotoptosis, acidosis and mesenteric gland involvement. His conclusions, however, that the expectation of cure is excellent, when the history is of more than one attack within a period of one year or less; *much poorer* when the attacks cover a period longer than one year; and *poorest* when the patient is operated upon or following the first attack, is difficult to understand, provided an exact diagnosis is made.

Zelezny-Baumdrecker. *Jour. Surg., Gyn. and Obstetrics.*

Cervical Erosions. This article deals with the method of electrocoagulation as applied to conditions of the cervixuteri. According to the authors it not only heals the erosions but cures the leucorrhoea. It corrects the condition of sterility associated with erosions and permits a normal dilation of the cervix at subsequent deliveries.

Contra-indications are stressed such as pregnancy, acute cervical infection and acute and sub-acute tubal involvement.

Quaintance. **Pneumoroentgenograms of the knee joint.**

This article covers a series of fifty pathological conditions in the knee-joint diagnosed by this method comprising such conditions as displacement

of a meniscus, loose bodies of various kinds, Baker's cysts, and hypertrophic arthritic changes. Its efficiency in demonstrating menisci, as verified by arthrotomy was 87% in the series. It is a simple and very valuable aid in the differential diagnosis of injuries and diseases of the left structures of the knee.

Totten. *American Jour. of Surgery.* **Acute Choleocystitis.**

This very interesting article stresses that no operation should be undertaken during an acute attack. Twenty-four hours should be allowed to determine those cases which require prompt surgery and unless the symptoms are very severe and progressive, operation is postponed. The observation period should be utilized for pre-operative treatment extending over a period of several days and should include intravenous glucose salt solution and calcium. Cholecystostomy or partial cholecystectomy is indicated in these cases where complete cholecystectomy is inadvisable.

Morris. *American Jour. of Surgery.* **Penetrating wounds of the Heart.**

This instructive article features "Tamponade of the heart." External bleeding ceasing and the pericardium filling with blood, constitutes Tamponade. Early recognition decreases mortality records. Early signs: (a) Pulse weak or absent; (b) arterial blood pressure low or absent; (c) venous pressure raised with superficial veins of neck distended; (d) heart sounds distant or muffled; (e) fluoroscopic examination shows diminution or absence of cardiac pulsation; (f) marked dyspnoea, pallor and cyanosis.

Immediate operation is necessary to relieve the tamponade and aspirate blood from pericardial sac. This temporarily decompresses the heart and allows sufficient time for operation. Intravenous fluids are naturally contra-indicated. Morphine and external heat advisable.

The operation is anatomically and surgically straight-forward and the post-operative care along usual lines for any other major operation.

Chase. *Surgery, Gynecology and Obstetrics.*

In this article, the writer lays special stress on technique in the radical breast operation. His belief is that local recurrences and *post-operative metastasis* are due not to inadequate and imcomplete removal of all structures so much as to the squeezing of the breast and contact implantation by hand and instruments. It is not enough that the surgeon be *tumor minded.* He must also be "cancer cell minded." He concludes that the field of operation may be implanted with cancer cells and avoids handling of the breast. In addition he advises an antiseptic technique consisting of parts moistened with strong antiseptic solution applied to the margins of the incision and changed frequently. Gloves changed after the primary incision—the only time the breasts are handled—and the second pair of gloves washed frequently in antiseptic solution during the operation. Instruments after being used are not allowed to come back into the field of operation.

Carroll. *American Jour. of Surgery.* **Progressive Post-operative Gangrene of Skin.**

Although such cases are relatively rare, every now and then, they do occur in an average practice and are rather disconcerting if you are unprepared to deal with them and act as quickly as possible. The Electrotherm knife with

electro-coagulation is the only effective measure worth-while to stop the advance of this most destructive process.

You must incise, excise and cauterize early and well beyond the red line of advancing disease using the electro-coagulating unit to control bleeding. Follow with supportive treatment, intravenous glucose and saline, stimulating tonics for the appetite, free full diet, fresh air. Sunshine and ultra-violet light to stimulate new growth of tissue. Skin grafting is necessary. Although the condition is a fearful one, the patient's morale should be fortified telling him that the condition is not fatal and that he will recover. Many of the very worst cases have recovered under the above treatment.

BOOK REVIEW

Surface and Radiological Anatomy for Students and General Practitioners. A. B. Appleton, W. J. Hamilton and I. C. C. Tchaperoff. pp. xii..312. 338 figs. W. Heffer and Sons, Cambridge, England. 1938. 15 shillings.

This book, by two London anatomists and a radiologist, is a sign of the life that is again coming into British anatomical teaching. The importance of the surface anatomy of the living body is again being stressed, and X-rays are being used, primarily as a means of "dissecting" the living body. Nowadays, if a student in hospital mistakes an epiphyseal line for a fracture, the radiologist should not blame the anatomist.

The volume can be highly recommended to graduates who wish briefly to revise their gross and radiological anatomy. Clear coloured pictures of dissections and good radiographs are placed alongside photographs of the living body, so that a minimum of reading is necessary. Brief explanations of radiological technique are given, so far as they are necessary for interpretation of radiographs. Diagrams of motor points for muscle stimulation are an added feature.

On the main topics the information is reasonably up to date. The ossification dates are open to criticism, as standards for normal healthy individuals; but this fault is shared by all the common textbooks of anatomy and radiology known to the reviewer.

DONALD MAINLAND.

Department of the Public Health

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

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

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

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory, from October 1st., to November 1st., 1938.

During the month, 227 tissues were sectioned and examined, which with 30 tissues from 10 autopsies, makes a total of 257 tissues for the month.

Tumours, simple	27
Tumours, malignant	34
Tumours, suspicious of malignancy	3
Other conditions	163
Tissues from 10 autopsies	30
	—257

Communicable Diseases Reported by the Medical Health Officers for the month of OCTOBER, 1938.

County	Cerebro Spinal Meningitis	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	V. D. G.	V. D. S.	Whooping Cough	Entero Colitis	Impetigo	Sycosis barbae	Erysipelas	TOTAL
Annapolis	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Antigonish	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Cape Breton	1	..	20	13	..	..	..	8	..	..	..	..	10	9	..	..	..	61
Colchester	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Cumberland	..	..	..	..	..	..	..	3	2	..	..	..	9	..	..	..	..	14
Digby	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Guysboro	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Halifax City	..	2	..	..	1	..	..	15	..	..	..	..	..	..	..	..	1	19
Halifax	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Hants	..	3	..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	7
Inverness	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Kings	..	..	..	15	..	1	1	..	..	..	4	5	..	..	1	1	..	28
Lunenburg	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Pictou	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Queens	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
Richmond	..	..	..	..	..	..	1	..	..	1	..	..	3	..	..	..	..	5
Shelburne	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
TOTAL	1	5	20	34	1	1	2	29	2	1	9	5	23	9	1	1	1	145

Positive cases Tbc. reported by D.M.H.O.'s. 93.

RETURNS VITAL STATISTICS FOR SEPTEMBER, 1938

County	Births M	Births F	Marriages	Deaths M	Deaths F	Stillbirths
Annapolis	15	11	16	3	3	0
Antigonish	10	6	7	12	11	2
Cape Breton	153	109	72	59	51	10
Colchester	22	26	26	16	13	3
Cumberland	43	35	36	21	16	3
Digby	27	27	17	12	7	0
Guysboro	18	9	6	13	8	0
Halifax	78	101	103	56	43	10
Hants	20	29	16	4	6	0
Inverness	16	12	9	6	6	0
Kings	35	38	21	10	9	2
Lunenburg	18	22	19	12	10	2
Pictou	27	33	37	10	15	1
Queens	9	10	8	4	2	0
Richmond	11	8	2	6	5	0
Shelburne	8	7	9	6	6	1
Victoria	6	2	6	3	2	0
Yarmouth	28	24	20	4	2	0
	544	509	435	257	215	34

Personal Interest Notes

DR. J. J. MACRITCHIE of the Provincial Dept. of Health attended the second annual meeting of Maritime Tuberculosis workers in Moncton during September, where Dr. MacRitchie gave a most interesting paper on "Anti-Tuberculosis Work in Nova Scotia." Dr. J. E. Hiltz and Dr. V. D. Schaffner of Kentville, and Dr. C. J. W. Beckwith of Sydney also attended the meeting.

The marriage took place in Halifax on October 17th of Miss Mary Adele Moriarty daughter of Edward Moriarty and the late Mrs. Moriarty and Dr. Basil Kenneth Coady, son of Mr. and Mrs. Matthew Coady of Armdale. Dr. Coady graduated from Dalhousie Medical College in May, 1938, and is at present on the staff of the Victoria General Hospital.

Flight Lieutenant F. L. Whitehead, M.D., and Mrs. Whitehead, who were married in September at Parrsboro, have sailed for their home in Cairo, Egypt, where Dr. Whitehead will be attached to the Medical Division of the Royal Air Force.

Dr. Lewis R. Morse, Toronto '36, who has spent the past two years at the Vancouver General Hospital, has returned to Lawrencetown where he will be associated with his father, Dr. L. R. Morse.

Dr. O. R. Stone and family have returned to Bridgetown after spending the past year in London and Vienna where the Doctor has been taking post-graduate work.

Dr. T. B. Acker of Halifax was guest of honour at Glace Bay in his official capacity as Illustrious Potentate of Philae Temple at a banquet given by Cape Breton Shriners during October. Dr. Acker was also guest speaker at the regular weekly luncheon of the Rotary Club of North Sydney when he described his recent trip to the International Rotary meeting in San Francisco.

The wedding was solemized in Halifax on October 22nd of Miss Elizabeth (Betty) Katherine Cunningham, daughter of Mrs. Cunningham and the late Dr. Allan R. Cunningham to Robert McFarlane Kerr, son of Mr. and Mrs. P. A. Kerr of Moncton. After a wedding trip to Rochester, N. Y., Mr. and Mrs. Kerr left for Moncton where they will reside.

Dr. J. G. MacDougall of Halifax is one of four surgeons who were chosen as Governors of the American College of Surgeons at a meeting held in October, in New York.

Dr. and Mrs. G. R. Forbes of Kentville, who were travelling to Boston over the New Haven and Hartford Railroad line which skirts the ocean, were caught in the full blast of the recent New England hurricane, as it broke over

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the train, passing a "fill" only a few feet above sea level. Passenger cars toppled over, waves lashed their fury at others, windows were broken and passengers swam or waded mountainous seas to shore. The terrific storm reached its height after they had passed New London. The water came higher until it seemed it would almost flood the train completely. They came to a dead stop when the air line broke. The wind was howling at one hundred miles an hour and whipping the breakers into a fury and the only course to pursue was to move up towards the engine which was two hundred yards from the end of the bridge. They reached high ground after a hard struggle of more than thirty minutes and sought refuge in a house all but swept away itself, where with six inches of water on the floor, no fire in the stove, and only a candle for light, men and women huddled for comfort and shelter. When the engine pulled a car away from the wreckage, Dr. and Mrs. Forbes spent the rest of the night in it, and managed to recover their luggage in the morning. A state official gave them a drive to Providence and a train carried them to Boston. Both were scratched and bruised in the struggle and considered themselves very fortunate that they escaped.

Dr. and Mrs. V. O. Mader have returned from a motor trip to Montreal. Dr. Mader was recently elected one of three vice-presidents of the Defence Medical Association at the annual meeting in Ottawa in October.

Sir Frederick G. Banting, discoverer of the insulin treatment for diabetes, conferred with members of the Faculty of Dalhousie Medical School and of the pre-medical scientific department at a meeting held at the Public Health Clinic on November 1st. The internationally known medical research worker and surgeon outlined the work of the Associate Committee on Medical Research of the National Research Council of Canada, of which he is the Chairman and for which he is making a survey of medical research facilities in universities across Canada. Following Dr. Banting's remarks there was a general discussion of the situation with special regard to the facilities for research at the Dalhousie Medical School.

Congratulations to Dr. and Mrs. T. F. Meahan of Glace Bay on the birth of a daughter, "Mary Coleen", on October 27th.

Dr. W. L. Muir of Halifax recently addressed a meeting of the Halifax Infirmary Alumnae.

Tweedsmuir Urges Public Instruction in Medicine.

Instruction of the public in the rudiments of medicine was suggested to the medical profession by Lord Tweedsmuir addressing the annual dinner of the Royal College of Physicians and Surgeons at Ottawa on October 29th. His Excellency, advancing the thought "in all deference and modesty" declared such instruction "need concern itself only with the most general principles". It should be directed, he urged, "to the prevention of needless anxieties and false hopes". The dinner terminated the two days' session of the Royal College and was presided over by its President, Dr. George S. Young of Toronto. Eminent members of the medical profession attended. Enlarging upon his suggestion the Governor General said that "if it were firmly rooted in the popular mind that something out of a bottle will not cure cancer, then

a good many quacks and patent-medicine vendors would go out of business." Long experience had made people familiar with certain common ailments but there appeared to be a host of new diseases, "mysterious affairs with which the ordinary man is completely unfamiliar", and which in consequence he dreaded. In many quarters something like panic developed when such diseases as infantile paralysis and sleeping sickness were mentioned. He believed much could be done to steady the popular mind if the medical profession were prepared to "give a little elementary instruction on such subjects."

The wedding took place at St. John's Newfoundland, on September 28th of Miss Mary Callahan and Dr. Theodore T. Monaghan, son of Mr. and Mrs. J. H. Monaghan of Charlottetown. After a honeymoon in Upper Canada and the United States, Dr. and Mrs. Monaghan left for Charlottetown, where Dr. Monaghan has opened a practice.

Dr. and Mrs. M. A. Macaulay of Halifax are on a motor trip to Boston where they are visiting their daughter, Mrs. Ralph S. Morton and Mr. Morton.

Dr. C. E. Kinley, Dr. H. D. O'Brien, Dr. Grace Rice, Dr. R. H. Stoddard, Dr. H. B. Atlee, Dr. W. A. Curry, of Halifax, Dr. L. M. Morton of Yarmouth, Dr. David Archibald of Sydney Mines, Dr. Fraser Young of Pictou, and Dr. R. W. Maclellan of Mill Village, Queens County, were recent visitors in New York.

Dr. and Mrs. H. V. Kent and Miss A. J. Kent of Truro have sailed by the Lady Hawkins on a trip to Trinidad.

Dr. C. W. Holland of Halifax, President of the Halifax Medical Society, gave a short address on the subject "Diabetes" at the annual convention of the Nova Scotia Home Economics Association held in Halifax during October.

OBITUARY

IT is with sincere regret that we learn of the death of Dr. William Henry Chase of Wolfville which occurred in Montreal on October 20th, at the age of forty-four. Dr. Chase was born in Wolfville and was educated in the public school and at Acadia University from which he graduated in 1916. He also studied at Horton Academy and St. Andrew's College, Toronto, and received his medical degree from Dalhousie University in 1922. Dr. Chase served overseas with the No. 7 Canadian Stationary Hospital (Dalhousie Unit) and also with the Field Ambulance Corps. Shortly after graduating in medicine he moved to Montreal, and at the time of his death was pathologist to two Montreal hospitals and curator of McGill University pathological museum. Surviving are his widow, formerly Miss Helen Geddes Webster, daughter of the late Dr. Conrad Webster, of Pictou and Yarmouth; two children, William and Frances, and a sister, Dr. Lalia B. Chase, of Port Williams.

At the twenty-first annual meeting of the Hospital Standardization Conference in New York City in October, in conjunction with the Clinical Congress of the American College of Surgeons, Dr. George Crile of Cleveland, chairman of the Board of Regents of the College, announced that 2,664 hospitals in the United States, Canada, and a few other countries, had been approved. The list of hospitals approved in Nova Scotia is as follows. Those marked with asterisks (*) have accepted the minimum requirements, but for lack of time or other reasons acceptable to the College have not yet been able to carry them out in every particular.

Amherst—*Highland View Hospital, capacity 72.
Antigonish—St. Martha's Hospital, capacity 130.
Dartmouth—Nova Scotia Hospital, capacity 500.
Glace Bay—Glace Bay General Hospital, capacity 200; St. Joseph's Hospital, capacity 100.
Halifax—Camp Hill Hospital, capacity 250; Children's Hospital, capacity 80; Grace Maternity Hospital, capacity 96; Halifax Infirmary, capacity 200; *Halifax Tuberculosis Hospital, capacity 59; Victoria General Hospital, capacity 250.
Kentville—Nova Scotia Sanatorium, capacity 315.
New Glasgow—Aberdeen Hospital, capacity 127.
New Waterford—New Waterford Hospital, capacity 69.
North Sydney—Hamilton Memorial Hospital, capacity 57.
Sydney—St. Rita Hospital, capacity 50; Sydney City Hospital, capacity 108.
Sydney Mines—*Harbour View Hospital, capacity 50.
Truro—Colchester County Hospital, capacity 54.
Wolfville—*Eastern Kings Memorial Hospital, capacity 40.
Yarmouth—Yarmouth Hospital, capacity 70.

The annual closing exercises of the Halifax Infirmary Training School for Nurses were held during September at the Halifax School for the Blind, when fifteen graduates received their diplomas. The address to the nurses was given by Dr. F. S. Finlay.

Dr. J. W. Merritt of Halifax, has been awarded a Fellowship in the Royal College of Surgeons. Dr. Merritt is a graduate and gold medalist of Dalhousie Medical School. Dr. Merritt has recently returned from a trip to Ontario and Quebec where he attended clinics at Ottawa, Montreal and Toronto.

Dr. E. P. Brison of Halifax attended lectures and clinics at the New York Hospital and the Psychiatric Institute and Bellevue Hospital in October.

Sulphanilamide

According to regulations under The Pharmacy Act, Sulphanilamide can be procured now only on a Physicians prescription. Publication of the new ruling was included in the current Saskatchewan Gazette.—(*Saskatchewan Medicail Quarterly*).

Slow Motion-pictures of Epileptic Seizure Enable Doctors to Study Convulsions Closely

A moving-picture study of epilepsy was presented at the recent meeting of the American Psychiatric Association in San Francisco by Drs. S. Bernard Wortis, of New York University College of Medicine, and Carney Landis and Hans Strauss, of Columbia University. The picture of an epileptic seizure was taken with a high-speed camera, so that the doctors could watch the convulsion in slow motion and observe each detail. It enabled them to see which muscles contract, which relax, the order in which contractions and relaxations take place, and from these determine the nerves and possibly the brain center involved.—(*The Diplomate*)

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